

4.1 INTRODUCTION

Chapter 4 presents findings pertaining to recreational boat owner preferences and needs. In order to construct a substantive picture of recreation boating needs and the status of existing recreation serving facilities in the Delta, a survey approach was developed and undertaken that provides multiple recreation user perspectives. To gather the information, two statewide survey efforts were carried out over a year-and-a-half period. Boat owner surveys were undertaken during the period from May 2000 to October 2001. The May 2000 survey utilized a database assembled by the Department of Motor Vehicles (DMV) for state-registered boat owners, while the 2001 survey relied upon the United States Coast Guard (USCG) Documented Vessels database. Collectively, these two databases contain a complete compilation of all registered recreation boat owners in California.

The data for recreational boat owners have been organized by two boat size categories:

- *large boats* (boats 26 feet in length or larger)
- *small boats* (boats less than 26 feet in length).

The survey was stratified by these specific categories according to guidelines for the Federal Boating Infrastructure Grant Program.

The 2001 survey targeted USCG-registered vessels within the state – referenced in this report as Documented Vessels. The USCG-registered boats include only the large category of recreational boats. In addition, revisions were made to the 2000 survey findings to clarify the results pertaining to the two principal survey categories, *large boats* and *small boats*. Specifically, the responses of the sail-boarders, originally a subgroup of the small-boat category from the 2000 survey, have been disaggregated from the small-boat category. Sail-boards are neither registered nor documented vessels and it was viewed that sail-boarders are a unique type of recreation enthusiast in the Delta. Also, the methods used to gather their responses were methodologically distinct and, if combined with

other small-boat owners, distorted the data results for the overall group. Finally, information gained from each of the surveys was consolidated into one tabular summary in order to determine a comprehensive overview of the range of responses. Samples of the referenced Survey Instruments are contained in **Appendix 4-1**.

The federal granting program, particularly as it pertains to the two identified boat size categories, mandated much of the survey design. Accordingly, the final questionnaires yielded a somewhat complex survey instrument and an associated array of detailed information. Policy-oriented results are shown within this report along with the underlying trends suggested by the data.

The distribution of samples and the number of surveys selected for each county for both the DMV and Documented Vessel statewide surveys, was proportional to the total number of boats registered in that county as listed. The number of listings in the DMV database totaled nearly one million registered boats. Since the research surveyed individual boat owners, situations of multiple-vessel ownership were screened to prevent more than one sampling of a single boat owner. A total of 22,759 listings are recorded in the 2000 USCG Documented Vessel database. The windsurfers or sail-boarder group was surveyed via a membership list provided by the Rio Vista Windsurfing Association. In this revised version of the assessment, sail-boarder preferences have been kept separate from the DMV and Documented Vessel data categories.

A field test of each questionnaire was conducted with corresponding response rates of just fewer than ten percent for the DMV survey. With this return rate in mind, a total of 8,570 surveys were mailed to boat owners in the small-boat category, with 743 usable returns, and 6,001 surveys were mailed to the large-boat category, with 490 usable returns. Accordingly, response rates were approximately eight percent for both boat size categories, in keeping with the expected response rate. The Documented Vessel survey involved the mailing out of a total of 2,000 surveys, with the same proportion of registered boats per county

ensuring an accurate representation of statewide USGS-registered recreational vessels. A total of 188 usable returns were tabulated for this group. The two survey efforts have been integrated and summarized for this report to attain as broad an understanding as possible of the range of recreational boat owners presently using the Delta waters. The content of this portion of the study covers recreational boat owner demographics and origin, boat ownership by type, and boat use patterns. Also presented are the associated recreation activities engaged in by the recreation boat owner, the information sources they rely upon to travel the Delta, their expectations regarding boating facilities and services, and finally, their perceptions pertaining to recreational boating-related issues along with suggestions for improvements in the Delta region.

It is important to note that the Delta Protection Commission (DPC) and California Department of Parks and Recreation (DPR) conducted a study of Delta recreation activities in 1997. Differing from the previous work, this current research focuses specifically on boating-related activities and specific water recreation sites and facilities within the Delta, while the DPR study took a wider perspective of combined water and land-side recreation in the Delta.

4.2 SUMMARY OF FINDINGS

OWNER PROFILE

- Boat owners involved in recreation in the Delta are predominantly middle-aged white males with moderately high levels of education. Large-boat owners are more likely to have no children at home compared to the more family-oriented small-boat owner. Documented Vessel owners are slightly older on average than the other boat owner categories while windsurfers and PWC owners constitute the youngest age group.
- Boat owners represent a significantly less ethnically diverse population segment than the overall cross section of the California population.
- Boat owners who have used the Delta within the past two years are predominantly from nearby northern California counties, with the largest proportion from Sacramento, Alameda, Contra Costa, San Joaquin, Santa Clara, and Solano counties.
- Orange, Los Angeles, San Diego, and San Bernardino counties in metropolitan southern California are the predominant origin for boat owners who either have not boated in the Delta within the past two years or never boated in the Delta.

BOATING CHARACTERISTICS

- Of those boat owners who have recreated in Delta waters, 65 percent have done so within the past two years. Among boat owners who have not visited the Delta within the past two years, distance is mentioned as a primary reason, followed by a preference for other boating locations.
- Among those who have never boated in the Delta, the primary reason is distance to the Delta (64%), with a portion also indicating a lack of information about the Delta (34%) as another reason.
- Large-boat owners are most likely to own gasoline-powered (diesel and gasoline) cabin cruisers (43%) and/or sailboats (30%), while small-boat owners use runabouts (42%) or specialized bass-fishing boats (18%), with a noteworthy minority using PWC (17%).
- As might be expected, the majority of small-boat owners store their boats at home on a trailer or dry storage rack (83%), while large-boat owners are most likely to keep their vessels on the water at a public or private marina (76%).
- Respondents who have recently visited the Delta tend to be high-frequency visitors, with the majority of their overall recreational boating activities conducted in the Delta – in short, a very loyal boating population.
- On a typical day on Delta waters, boat owners might travel a round-trip average distance of 20 to 25 miles on their boats, with small-boat owners traveling at the higher range of this average.
- Somewhat more than one-third (38%) of small-boat owners take overnight trips in the

Delta, while about three-quarters (75%) of large-boat owners do so.

- Among boat owners, seasonal use of the Delta waters peaks during the summer, with a noteworthy percentage of boat owners often extending use into the fall or spring seasons. Off-season use is somewhat more pronounced for large-boat owners. The fall has the most cited off-season use, with the least boating activity identified in the winter season.
- Complementing county origin data, the majority of boat owners say that they travel from within a 75-mile radius to get to the Delta (40 mile mean). However, a noteworthy minority does travel from beyond 100 miles to recreate in Delta waters (21%).
- More than 50 percent of those who own large vessels prefer a shore or transient slip as a means of access to the shore.
- Personal experience or friends and relatives are the most-mentioned sources of information about the Delta, with owners of small boats most likely to use these sources. Large-boat owners are more likely to get their information from a marina or general information publication.
- Ranked in order of preference, cruising, swimming, sightseeing, fishing, and visiting restaurants are the most popular recreational activities in the Delta among boat owners.

BOATING FACILITY NEEDS

- In response to specific site and associated facility need questions, a majority of respondents consider existing facilities *fine as is*. Large-boat owners are somewhat more satisfied with existing facilities compared with small-boat owners. Also, with large-boat owners, *add/expand* responses are more common than *repair/replace* responses.
- Among those who indicate specific facility needs, perceptions of facility needs vary considerably by boat size. Large-boat owners are primarily interested in bilge water pump-outs, sewage pump-outs, long-term tie-ups, and oil disposal. Small-boat owners want more or improved restrooms and showers, campgrounds, day-use and picnic areas,

parking, carry-down walkways, and launch ramps. Boat owners from both groups are most in agreement about the need for more or improved short-term tie-ups.

- Small-boat owners primarily focused their site references to the West zone vicinity. While large-boat owners also mention the West Zone more than other Delta zones, they more frequently referenced sites in the Central and East Zones.

OWNER PERCEPTIONS

- Factors identified as the greatest impact on a decision NOT to boat in the Delta are fairly consistent with regard to boat size. Both large- and small-boat owners indicate that waterways congested with boat traffic and poor water quality for swimming are significant impediments to deciding to visit the Delta. Large-boat owners are most likely to mention shallow water depths as having a high impact on decisions to not visit.
- Both large- and small-boat owners agree that the most important attributes of recreational boating destinations include regulation and safety, congestion-free waterways, few boating conflicts, and good water quality. Good fishing, natural resources, and services and supplies are also identified as important.
- Perhaps the most striking outcome regarding the survey results among all categories of respondents is the disparity between factors considered most important to the Delta boating experience and what is identified as most problematic. In particular, the quality of the water, identified as the single most important aspect for the boating experience, is also perceived as the Delta's most urgent problem, followed by waterway congestion, regulation and safety, and boater conflicts.
- The most cited response for improving recreational boating in the Delta is the need for better water quality. Short-term tie-ups and slips were the most frequently stated need by the large-boat category, while more, and better restrooms were the most frequently mentioned amenity improvement by the small-boat category.

4.3 OWNER PROFILE

This section describes the demographic characteristics of boat owners of both large and small boats including age, gender, household type, education, ethnic composition, and state of residence. The data are summarized in **Table 4-1**. As indicated, the majority of respondents are male, with an average age of 56 years for large-boat owners, and a slightly younger average of 50 years for small-boat owners.

The large-boat owners report somewhat higher levels of education, with a majority having completed a college education. In comparison, small-boat owners have a greater proportion with some college or technical training.

Small-boat owners are more likely to have children living at home, while a significant percentage of large-boat owners are “empty nesters” – having children who no longer live at home. People of European descent (white) are the predominant ethnicity in the large-boat category while the small-boat category shows somewhat more diversity. By contrast, the small-boat owner profile comprises a somewhat younger, family-oriented with a slightly greater amount of ethnic diversity.

By far the greater part of boat owners who use the Delta come from within California (98%), with less than two percent visiting from neighboring states. However, since the database was principally derived from California boat owner registrations, the associated sample of out-of-state visitors is small. Further examination of origin by county indicates that the majority of boat owners are not only Californian but also regionally based

– from the 13-county surrounding region (See **Table 4-2**). This 13-county region has been designated for this study as the Primary Market Area (PMA) - described in greater detail in **Chapter 6**.

Within the PMA, the top citations by boat owners from both boating groups include Contra Costa, Sacramento, San Joaquin, Alameda, Solano, Santa Clara, and Stanislaus counties. A small portion of boat owners arrive from southern California – principally Los Angeles, Orange, and San Diego counties. However, given the size of the southern California population, this is a proportionally limited penetration by those geographic areas.

Further substantiating the regional preference for the Delta is an examination of respondents who stated that they have not boated in the Delta within the past two years or have never boated in the Delta at all. The areas most likely to be mentioned by those who have had Delta boating experience but not within the past two years are Orange and Los Angeles counties.

Among the *never visited the Delta* group, all of the listed counties of origin are in Southern California, with the top six referenced counties for both boat sizes being Los Angeles, Orange, San Diego, San Bernardino, Riverside, and Ventura counties. Clearly, distance to the Delta is a primary determinant of likelihood of use, with the southern California market not considering the Delta as a primary place to travel for recreational boating. One explanation for this is that Southern California boat owners have nearer alternative freshwater boating venues, such as the Colorado River.

**Table 4-1
Boater Profile by Boat Size**

	Boats 26 Feet or Greater			Small Boats	Sail-Boarders
	DMV Registered	Doc Vessels	All Large Boats		
Gender (%)					
Male	85%	88%	86%	84%	87%
Female	15%	12%	14%	16%	13%
Average age	55.5	57	56	50	48
Education (%)					
No high school	1	1	1	2	1
High school grad	9	5	8	9	n/a
Some college/tech	39	28	29	45	29
College grad	32	35	34	30	32
Grad degree	19	31	28	14	38
Household Type (%)					
Single no children at home	15	15	15	9	30
Single with children	3	0	1	3	1
Couple no children at home	55	65	57	40	40
Couple with children	22	14	20	36	24
Multiple adults	2	1	1	2	1
Other	3	5	6	10	4
Ethnic Composition (%) *					
Mexican American/other Hispanic	5	3	5	8	1
Caucasian/White	93	95	94	87	98
African American/Black	1	0	1	9	0
American Indian	2	1	1	3	0
Asian/Pacific Islander	2	3	2	4	4
Other	3	3	3	4	1
Declined to state	12	14	13	12	16
State Residency (%)					
California	98	98	98	98	99
Other	2	2	2	2	1

* Survey respondents were given the option of indicating one or more ethnic categories, so results may exceed 100%.

Table 4-2
Boater Origin by Boat Size
(Have Boated in the Delta during the Past Two Years)
(Percent)

County	Large Boats	Small Boats
Contra Costa	14	16
Sacramento	13	14
San Joaquin	6	13
Alameda	7	8
Santa Clara	8	6
Stanislaus	5	6
Solano	3	5
Los Angeles	2	6
Placer	2	5
El Dorado	2	2
Marin	5	--
San Mateo	5	1
San Diego	1	2
San Francisco	1	--
Merced	--	--
Shasta	1	1
Sonoma	4	2
Yolo	2	--
Butte	1	--
Fresno	1	2
Lake	--	1
Orange	3	1
San Bernardino	1	2
San Luis Obispo	--	1
Santa Barbara	1	--
Tehama	--	--
Ventura	3	1
Kern	--	1
Monterey	1	--
Nevada	1	1
Tulare	--	1
Other	6	2

4.4 BOATING CHARACTERISTICS

PERCENT BOATING IN THE DELTA

As summarized in **Table 4-3**, among all surveyed boater categories, the Delta is a prominent choice for recreational use with 52 percent of the large-boat owners and 40 percent of the small-boat owners having recreated in the Delta at some time in the past. Of the respondents who have at some time been to the Delta, 68 percent of the large-boat

owners and 61 percent of the small-boat owners have been to the Delta in the last two years. Responses suggest that owners of the larger boats are more likely to have past Delta experience and also to have taken more recent trips to the Delta, perhaps reflecting that access is somewhat less problematic for the large-boat owners. For those who have never boated in the Delta, most responded that the area was simply too far from their home, followed by a lack of information.

Limited information had a particular impact on small-boat owners, with more than a third of these respondents (36%) commenting accordingly. Small-boat owners also mentioned a preference for other boating locations (19%) at a rate similar to those with large craft (17%). Large-boat owners were more likely to say that the Delta does not have their type of boating, with 16 percent indicating such. A small proportion of surveyed large- and small-boat owners indicated that they had a negative impression of the Delta as a destination (6% and 5% respectively). Distance away is also the primary reason for not having visited the Delta recently followed by a preference for other locations. Note that compared to those who have never visited the Delta, a greater proportion of boat owners who have recently visited the Delta have a negative perception of the Delta’s image, suggesting a declining image as an optimum boating destination, especially among small-boat owners (20%).

BOATING PATTERNS

Boat owners who own large vessels are most likely to use cabin cruisers (43% gasoline, 19% diesel) or sailboats, and house or pontoon boats as shown in **Table 4-4**. Small-boat owners mentioned using a runabout of some type (42%). Boat owners in this group own an interesting range of craft from cabin cruisers to PWCs or canoes and kayaks. In the “other” category, large-boat owners were most likely to mention runabout followed by ski boat, while small-boat owners mentioned sail-board or ski boat.

Approximately 75% of all recent Delta boating trips were taken from owners living within the Delta PMA region (the 13 surrounding counties) regardless of boat size used. This result suggests that those with recent Delta experience are not only high-frequency boaters, they are also a loyal group apparently willing to spend the majority of their boating time in the Delta.

Table 4-3
Top 13 Reasons for Boating/Not Boating on the Delta
*(Percent)**

Boat Ownership	Large Boats	Small Boats
Boating Activity		
Have boated in the Delta	52%	40%
Delta boat owners who boated within past 2 years	68%	61%
Reason why never		
Do not know about the Delta	24%	41%
Too far from my home	67%	61%
Prefer other locations	17%	20%
Doesn't have my type of boating	16%	5%
Negative impression of the Delta	6%	5%
Other	13%	18%
Reason why not last 2 years		
Too far from my home	58%	48%
Prefer other locations	28%	26%
Doesn't have my type of boating	9%	9%
Negative impression of the Delta	7%	8%
Delta has become less desirable place	6%	20%
Other	34%	44%

*Survey respondents were given the option of indicating one or more choices, so results may exceed 100%.

Table 4-4
Boating Patterns by Boat Size
*(Percent)**

Boat Ownership	Large Boats	Small Boats
Cabin cruiser (gas)	43	18
Cabin cruiser (dsl)	19	2
Runabout	12	42
Sailboat	30	10
Bass jon boat	7	18
Inflatable Raft	n/a	12
Rowboat	1	4
Houseboat/pontoon	14	4
Canoe/kayak	1	6
Jet boat	2	10
PWC	1	17
Other	19	27
Storage Type		
At home on trailer or dry-storage	n/a	83
Waterfront property – own or rent	0	4
Waterfront property – permanent residence	8	0
Waterfront property – seasonal residence	0	4
Public or private marina	76	8
Dry-stack or commercial facility	3	0
Other	7	4
Boating Patterns		
Average distance to Delta (driving distance)	n/a	40
Length of primary recreation vessel	36	18
Average party size	3	3
Average number of fishing trips (over 12 months)	7	4
Average number skiing trips (over 12 months)	4	1
Percent stayed overnight	38	75

*Survey respondents were given the option of indicating more than one response, so results may exceed 100%.

Table 4-4 shows some of the more apparent boating patterns revealed through survey responses. Regarding vessel storage, the greater majority of boat owners stated a specific storage preference. Large-boat owners were most likely to mention storage in a public or private marina (76%), followed by storage at a personal waterfront residence. Note that since three percent of large-boat owners also mention storage at a commercial boat-stack type facility, the combined use of marinas or commercial facilities is a preference for about eight out of ten large vessels. Among those owning small boats, storage at home on a trailer or dry storage was the most frequent response (83%), with a minority keeping their boats at a marina (8%) or waterfront property. Other responses for the large-boat group included storage at a home facility.

Distance traveled while boating in the Delta ranges from an average of 20 miles for large boats to an average of 24 miles for small boats. This finding is unexpected given the capacity for large vessels to comfortably cruise greater distances. Large-boat owners are more likely to stay in the Delta overnight and tend to stay a little longer than small-boat owners when taking overnight trips. Compared to the large-boat group, small-boat owners are more likely to fish or water-ski during their trip. These data suggest that large-boat owners are a somewhat less active recreational boater, with this group probably preferring a more leisurely experience. The average party size, regardless of vessel type, is approximately three persons per group.

Figure 4-1 shows the distance traveled by survey respondents to access Delta waters. Asked only in the small boat questionnaire, the one-way distance

traveled to the Delta for recreational boating averaged 40 miles. These findings complement the county of residence data and underscore the regional nature of the Delta market. The following figure displays the distribution of small-boat

owners by categories of distance traveled, with the bulk of these boat owners (62%) residing within 50 miles of the Delta’s waterways. Sail-boarders as a group are slightly less local and tend to travel greater distances to use Delta waters.

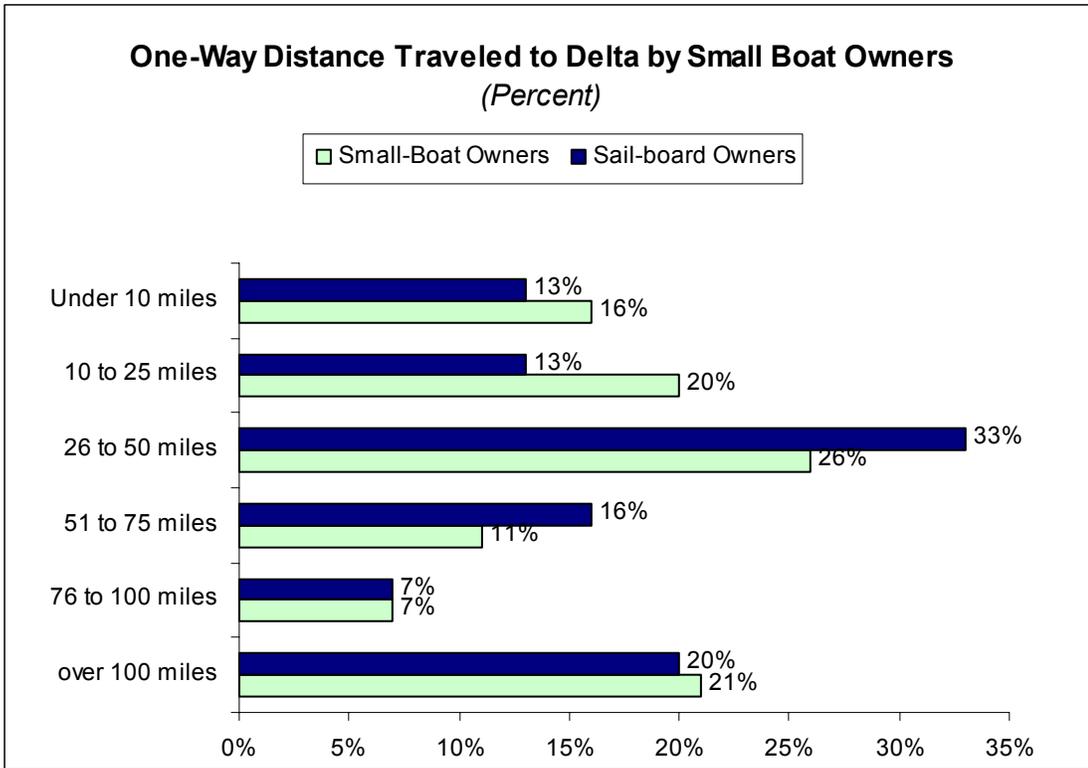
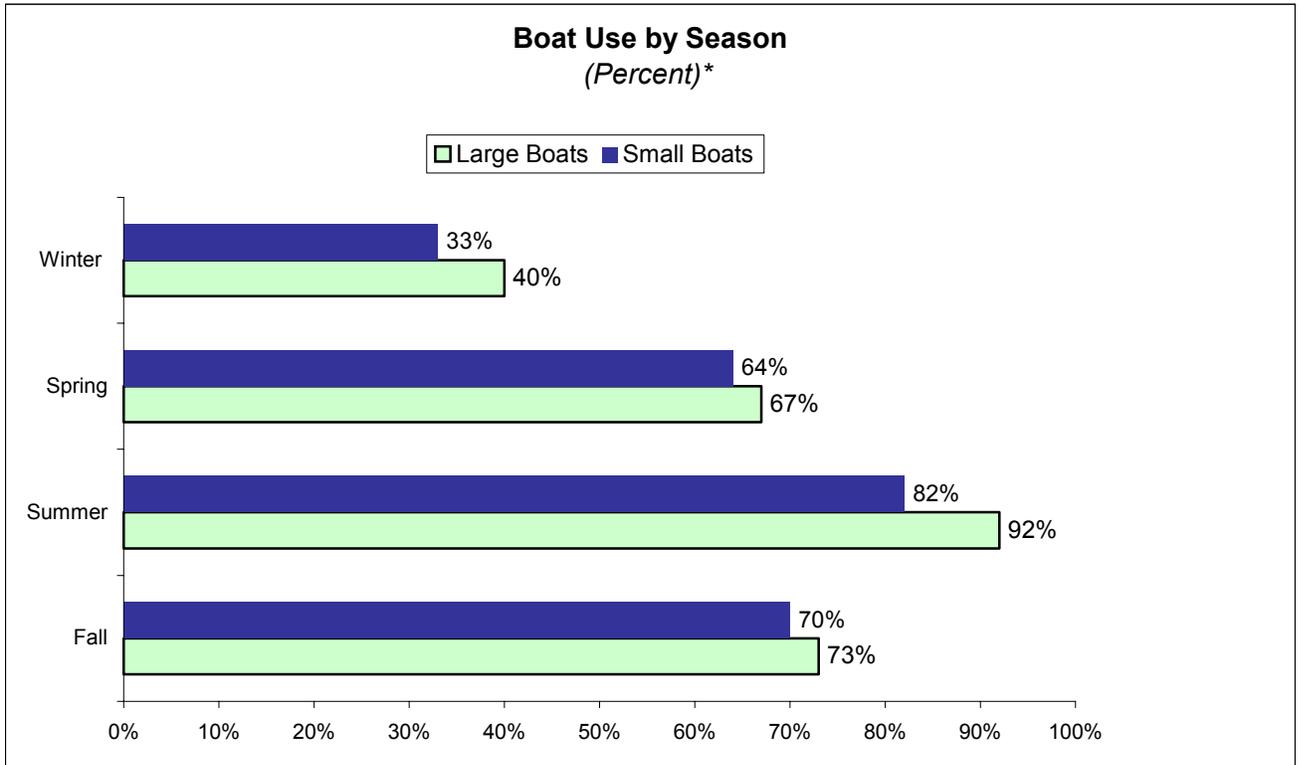


Figure 4-1

As shown in **Figure 4-2**, summer is the primary season of use for owners of both large and small boats. Shoulder season boating also occurs for both groups. However, with weather and waterway conditions affecting seasonality, large-boat owners with cabin cruisers are more likely to visit the Delta during the spring, fall, and winter

season as compared to those using smaller, typically open vessels. Note that these numbers do not represent visitor days but rather a propensity to visit by season. The fall season appears to be a significant alternative to summer preference, with 73 percent of the large-boat owners and 70 percent of the small-boat owners indicating that they use the Delta during that time.

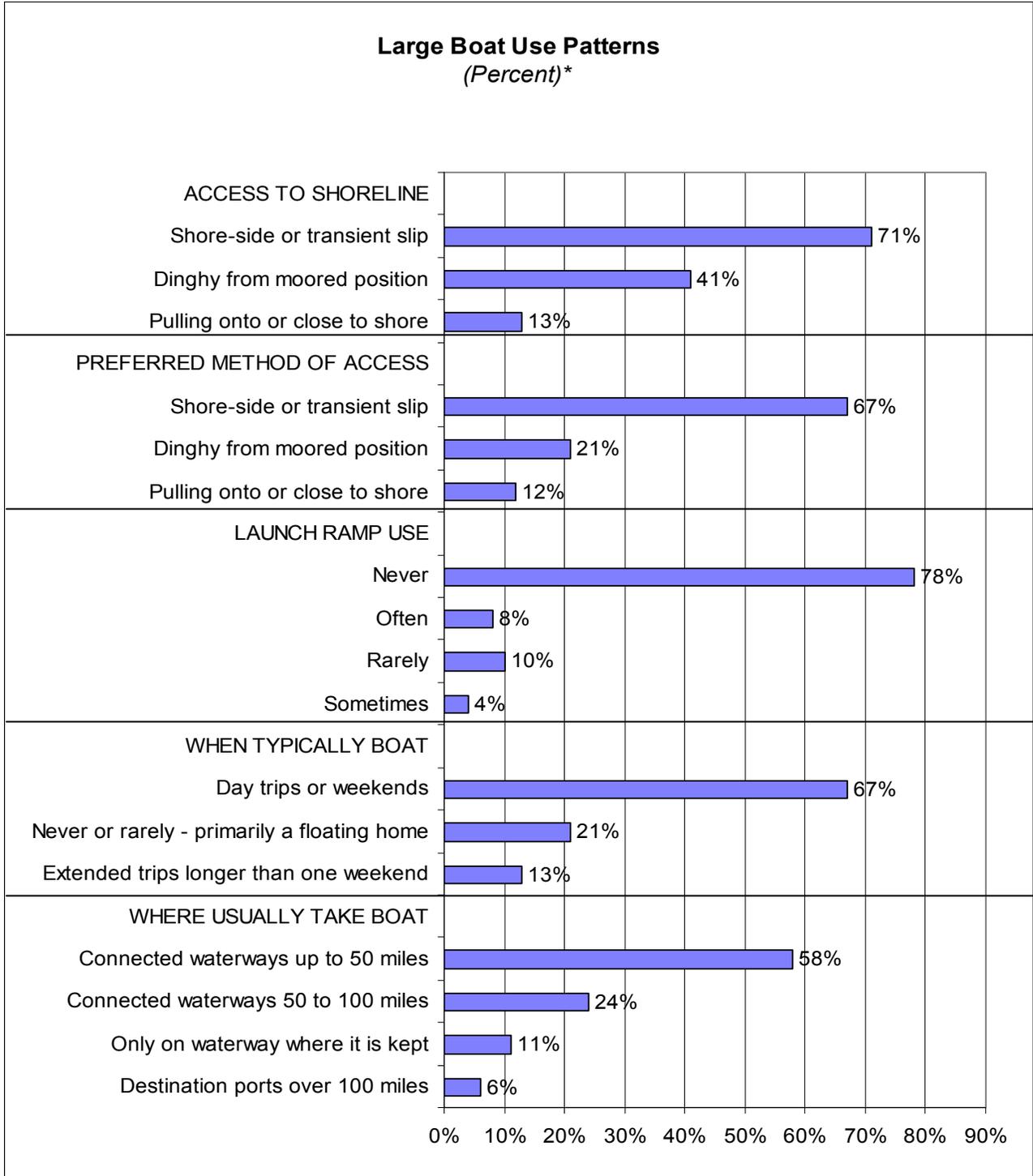


*Survey respondents were given the option of indicating more than one response, so results may exceed 100%.

Figure 4-2

Figure 4-3 shows a range of boating preference patterns specific to the large-boat category. Revealed in this summary figure are some of the more obvious use patterns and preferences shown by this group. Around 71 percent of the large-boat owner category access the shoreline from a shore-side or transient slip, with 41 percent also using a dinghy. A lesser number of survey respondents pull onto or close to shore for shore-side access. In addition, the majority of respondents (67%) prefer a slip to other modes, with only a minority preferring a dinghy or near-shore approach. As might be expected, use of a launch ramp is infrequent for large-boat owners. Most large-boat owners (78%) never use launch ramps or rarely use them (10%). A comparatively small proportion use ramps sometimes (4%) or often (8%).

Delta large-boat excursions are typically day trips or weekend events (67%). Note that about one in five (21%) of large-boat owners use their vessel primarily as a floating home in the Delta with little or no actual boating activity. With no comparable data for other California waterways, this percent of use as a residence appears to be a high figure. Finally, only one in ten boat owners take their large vessels on extended trips, a limited proportion considering the range of the Delta’s waterways. Complementing these data, the majority among the large-boat category (58%) travel on connected waterways up to 50 miles from homeport, with minority (11%) boating only on the waterway where the vessel is kept. Among those boating greater one-way distances from homeport, 24% travel up to 100 miles and a small minority (6%) travel in excess of 100 miles.



*Survey respondents were given the option of indicating more than one response, so results may exceed 100%.

Figure 4-3

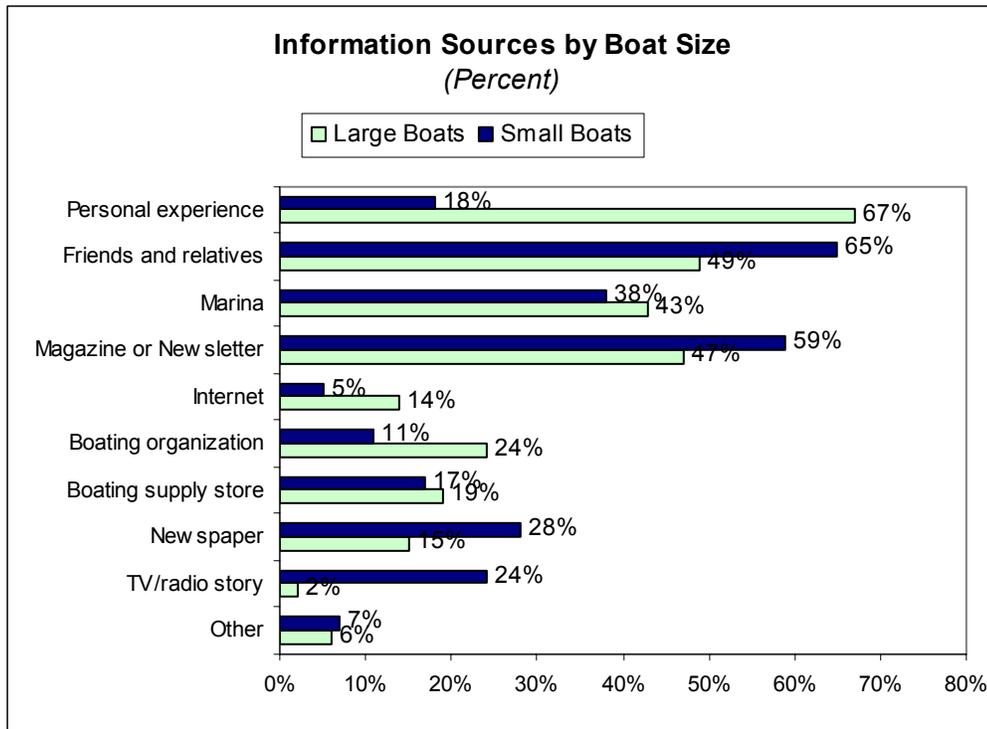
INFORMATION SOURCES

Regardless of boat-size category, the information source most mentioned is personal experience. This finding may reflect Delta boater loyalty and

the knowledge associated with repeat visitation. However, note that among the remaining information sources, there is a noteworthy difference in responses by boat size category.

Figure 4-4, reveals that large-boat owners seem to prefer specialized sources of information such as marina operators, boating publications, and boating supply stores. Large-boat owners also appear to be more reliant on the Internet. In comparison, small-boat owners are more likely to rely on general topic magazines or newsletters and friends or relatives. Other sources mentioned by this group include boating associations,

guidebooks, or chambers of commerce. As with trends among other recreation groups (such as snow-related sports), we may expect that the Internet will become increasingly important to boat owners in the Delta. To the extent that local Delta communities or boating facilities are interested in drawing new boat owners to the Delta, an increasing presence on the information superhighway could be a viable strategy.



*Survey respondents were given the option of indicating more than one response, so results may exceed 100%.

Figure 4-4

RECREATIONAL ACTIVITIES

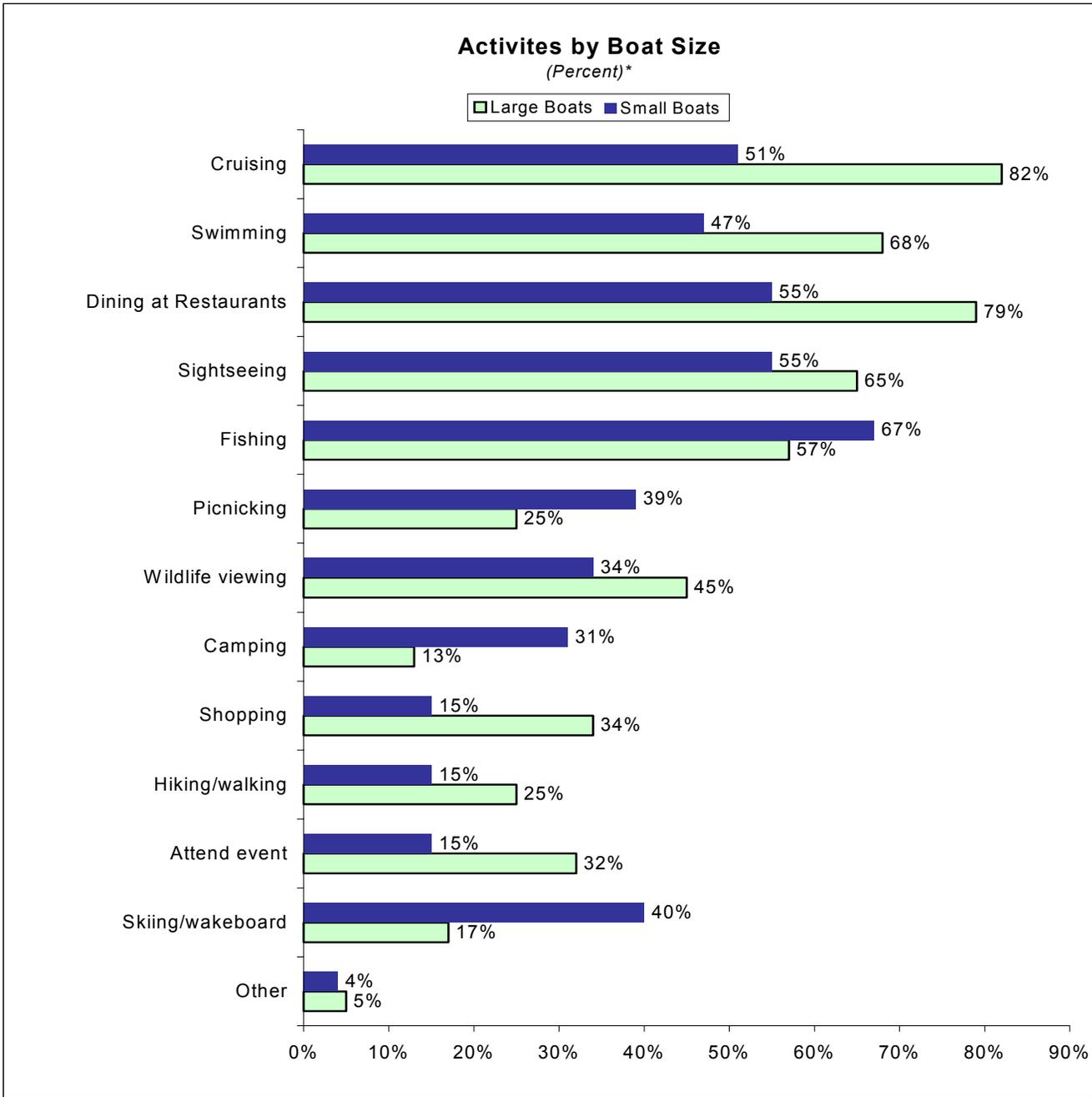
Related recreational activities differ somewhat according to size of boat used. As shown in **Figure 4-5**, large-boat owners are most likely to cruise the Delta’s waters, dine at a restaurant, sight see, or view wildlife. As part of the cruising experience, these boat owners also tend to make stops at shore-side amenities and activities such as restaurants and local events or festivals. Even though the large-boat owner is a minority in the Delta, the preference for shore-side access via slip by this group might suggest that communities could generate greater boater visitation by providing transient slip development.

Small-boat boat owners on the other hand are more likely to fish, camp, and ski or wake-board. These data complement the greater distances traveled by small-boat owners and further enhance the profile of this group as a relatively active boater type. Providing adequate access to camping and picnicking would best serve this active small-boat owner group.

Relatively smaller portions of both groups (small boats-15 percent, and large boats-25 percent) choose to include hiking or walking as part of their visit, reflecting the dominance of on-water activities compared to other recreation users of the Delta as presented in the DPR study. However, preferences for restaurant dining and picnic activities suggest some interdependence with land-

associated activities. Although the recreational boating public is presently focused on activities related to their boats versus general land-based activity, it can be inferred that attractive

destinations could generate an increase in land-related activity preferences.



*Survey respondents were given the option of indicating more than one response, so results may exceed 100%.

Figure 4-5

4.5 FACILITY NEEDS

REPAIR, UPGRADE, REPLACE AND ADDITIONS (RURA)

For both boater groups there is a relatively high rate of satisfaction about all Delta boating facilities. In response to the question regarding repairs, upgrades, replacements, or additions (RURA) for “all sites,” boat owners operating

large boats (71%) and small boats (61%) indicating that facilities and sites were *fine as is*. As shown in **Figure 4-6**, this level of satisfaction is less pronounced among small-boat owners, perhaps indicating the need for somewhat greater focus on facilities serving this particular group.

Note that a distinct minority of facility need responses center on a desire for replacements or repairs.

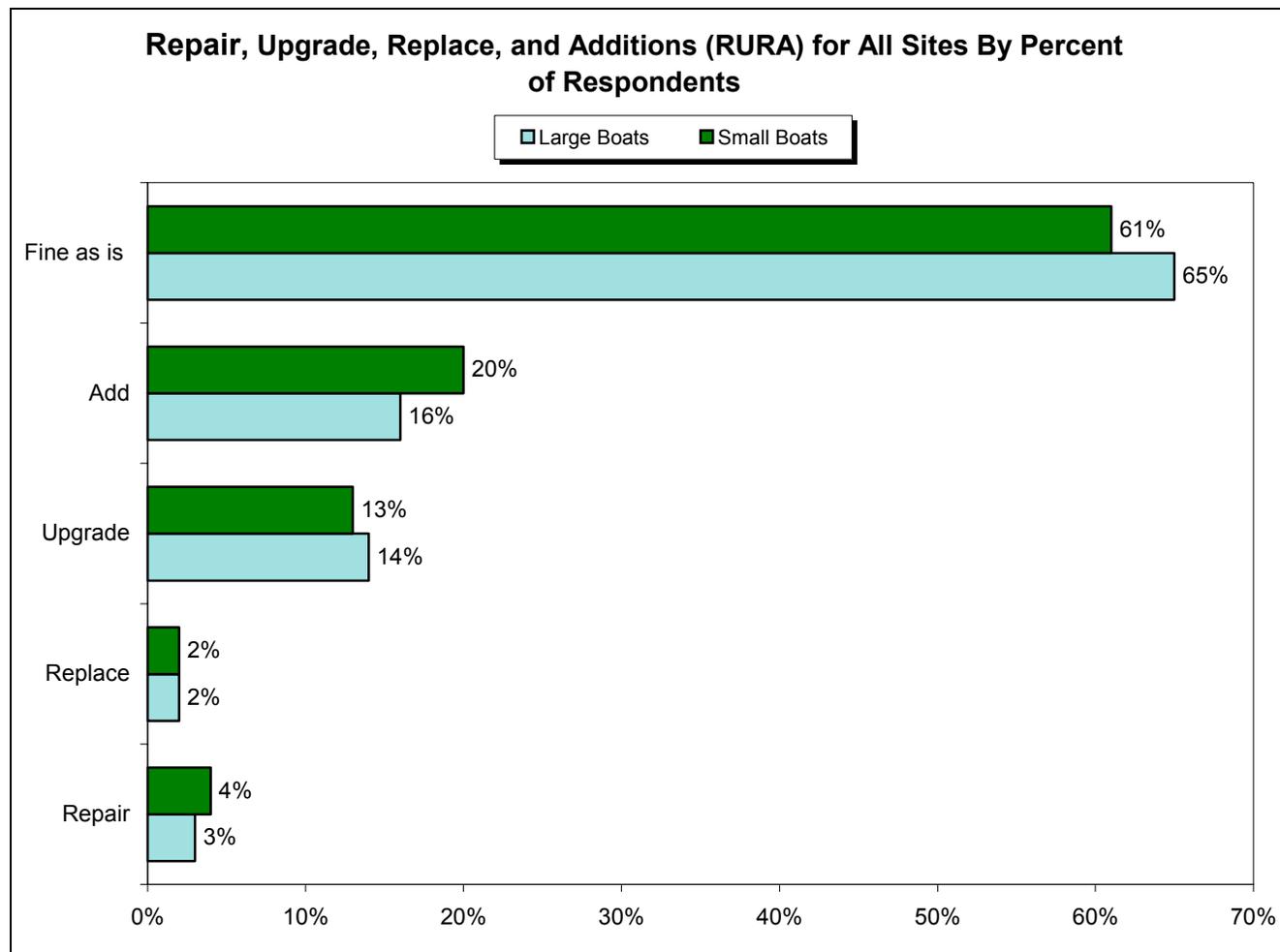


Figure 4-6

These findings of relatively high satisfaction levels are very interesting when contrasted with the survey of the facility operator group, as described in **Chapter 5**. Among the operator group, levels of satisfaction regarding the quality and conditions of facilities are relatively low, with deferred maintenance the greatest single object of dissatisfaction. This difference may reveal that, in general, boat owners are primarily focused on the Delta resource and, to the extent that the boat-

serving facilities are not an impediment to their experience, they are not concerned about issues such as varying levels of deferred maintenance. Workshop-derived comments suggest that facilities of many types in the Delta are lacking in features and services offered in addition to general conditions of deferred maintenance. Among the identified facility types needing RURA, there are some noteworthy differences between responses of the large- and small-boat owners (See **Figure 4-7**).

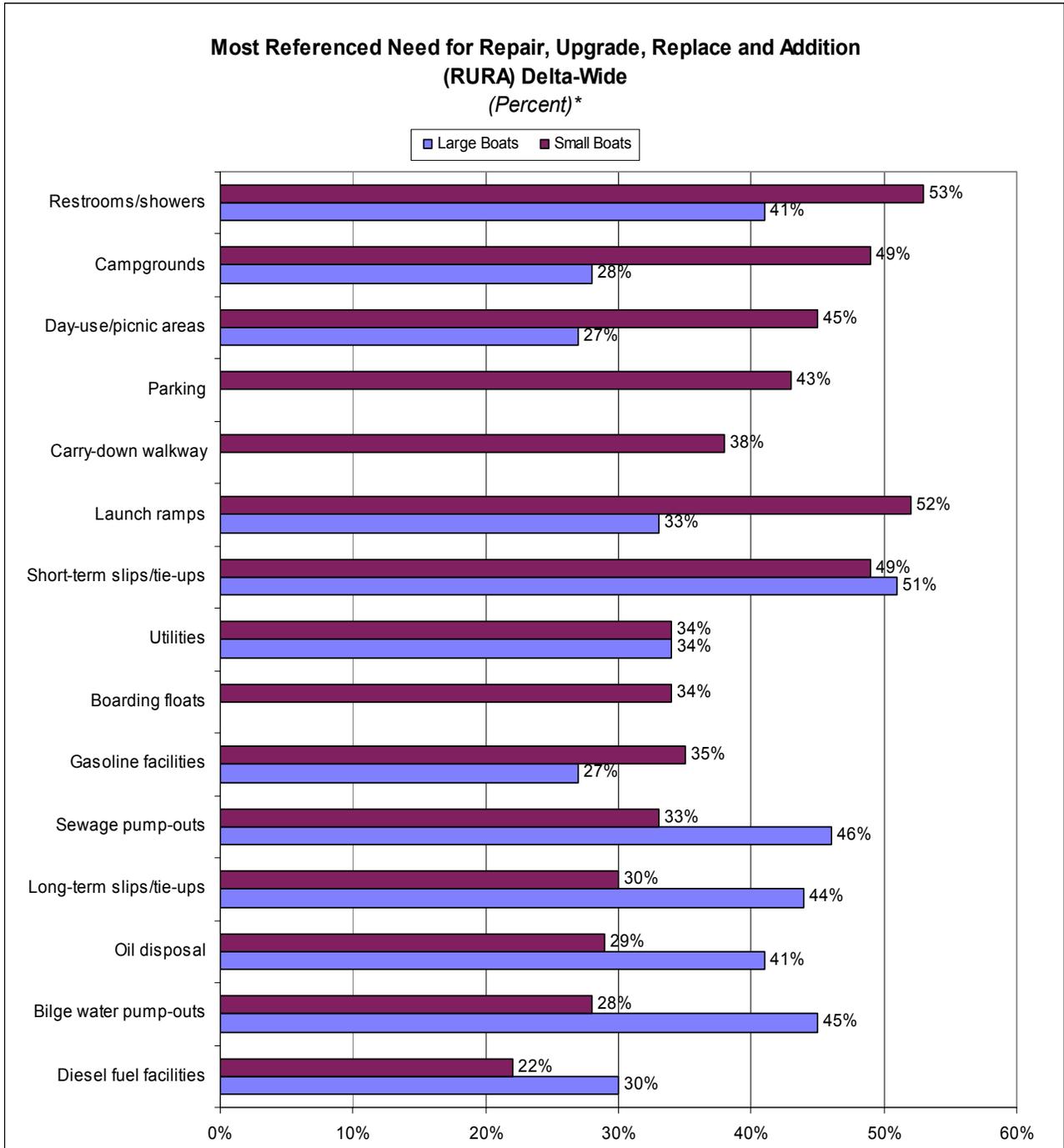
Complementing the findings for facility needs overall, large-boat owners were less likely to identify specific facilities in need of improvement. The large-boat category generated a majority need response for only one amenity type: *Short-term Tie-ups*. Expressed RURA needs by the small boat category on the other hand were more extensive, with a majority or near majority of responses given for several amenity types. The most-mentioned items by percent of overall facility need responses for large-boat owners are short-term slips (51%), sewage pump-out facilities (46%), bilge pump-out facilities (45%), and long-term slips (44%). In addition, this group mentioned the need for oil disposal sites (40%). The availability (or perceived availability) of pump-outs and disposal is a principal concern for large-boat owners. In addition, in the public workshop outreach sessions, several participants said that they had observed boat owners dumping waste directly into Delta waters. This finding suggests an elevated level of concern about the Delta's environmental state of health. A greater need was expressed for diesel fuel facilities (30%) compared with (27%) for gasoline. To a lesser degree than for small-boat owners, available restrooms remained a subject of concern for the large-boat group, with about two in five (41%) mentioning this need. These data indicate that, as a group, large-boat owners are primarily interested in places to moor their boats and access restaurants and retail services. Given the activity profile of the large-boat group, these types of facilities might best be placed near land-side attractions, especially restaurants and retail operations – an apparent opportunity for economic development within or near Delta communities. Specific transient facility-associated amenities desired by this group include facilities for disposing of waste, bilge water, and oil. While statistical data regarding the pricing of these services was not gathered in this survey, public workshop participants urged keeping these services as low as possible, arguing that high costs might encourage dumping.

Owners of small boats were most concerned about the lack of restroom and shower facilities (53%). While they also expressed the need for short-term slips (49%), the need for launch ramps was a greater concern (52%). Campgrounds were

identified as equally important as short-term slips (49%), closely followed by the need for more and better day-use facilities (45%), and improved/expanded parking (43%). A second tier of facility needs expressed by the small-boat group included carry-down walkways (38%), gasoline facilities (35%), utilities and boarding floats (34%); sewage pump-outs (33%), oil disposal (29%), and bilge pump-outs (28%). These findings support the qualitative information gathered during the public workshops. The Westgate site (operated by San Joaquin County Parks) and the Brannan Island and Windy Cove sites (operated by DPR) were noted as models for improvements desired elsewhere in the region. In particular, the call for more restrooms and showers was expressed at all the workshops and demonstratively conveyed in the data. Moreover, these observations complement the activities profile for the small-boat group, which indicated preference for skiing, fishing, camping, and day-use and related facilities that support this active recreational group.

Other minor concerns expressed by small-boat owners involved boating access issues. These concerns include carry-down walkways (38%) and to a lesser extent, utilities (34%), i.e., water, electric, phone, and cable. Although not clear from the response data, utilities are likely needed in support of the listed land-side amenities mentioned. A third level of concern, comprising somewhat less important improvements, include boarding floats, fuel facilities, sewage pump-outs, long-term slips, oil disposal, bilge water pump-outs, and diesel fuel facilities.

These findings suggest that, compared to large-boat owners, the small-boat owners are primarily interested in relatively simple facility improvements in terms of infrastructure costs. Restrooms, campgrounds, and day-use and parking areas represent a lesser amount of capital construction in comparison to marinas, which would likely include most of these elements in addition to a more intensive level of development. Access infrastructure for the small-boat category may also be less costly, with short-term mooring the most important component. Buoys were mentioned at the public workshops as a short-term mooring solution.



*Survey respondents were given the option of indicating more than one response, so results may exceed 100%.

Figure 4-7

FACILITY NEEDS BY DELTA ZONE

As described in **Chapter 2**, the Delta region is a unique recreational boating environment with numerous waterways covering hundreds of miles and served by multiple boating facilities – from simple launch ramps to full-service marinas. To

best utilize the collected data and provide a geographic context for the information, this section looks at the Delta region by the previously defined zones. Survey respondents were not only asked to identify specific facility needs by type but also by which geographic areas (zones) of the Delta would need these facilities. Respondents

were allowed to list multiple locations for the specific facility types so the total responses are not necessarily additive to 100 percent.

Figure 4-8 illustrates the geographic distribution of responses regarding where repair, replace, and expand improvements are most needed. In this figure “*Fine as is*” responses, which received the highest number of replies are also included (see **Figure 4-6** for a break down of need responses by boat category). The responses are also indicative of the percentage of survey recipients who responded distinctly to each specific facility need category. For example, 297 small-boat owners responded to the question regarding launch ramp needs, while only 164 large-boat owners responded to the same question. This figure generally indicates where in the Delta boat owners are thinking about the conditions of facilities both in terms of potential needs and in their point of view, where they consider facilities “*fine as is*”.

As previously identified, the majority of responses are concentrated on sites in the West Zone. Over half (60%) of the large boat respondents identified boating facilities in this zone – the largest proportion of any Delta zone mentioned by this group. Similarly, a majority of small-boat owners (51%) mentioned facilities in the West Zone.

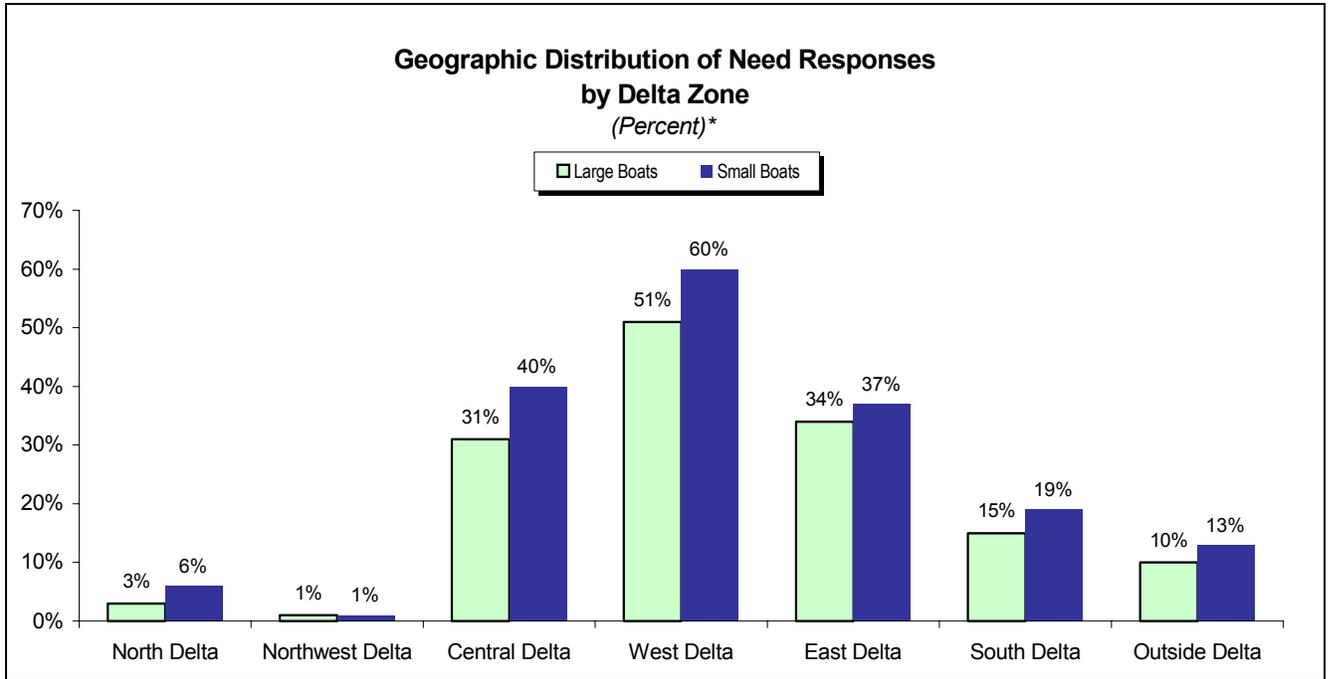
When added to the adjoining zones – Central Zone and East Zone – it is evident that the preponderance of responses by both the large-boat and small-boat owners identifies this centrally located Delta area as their primary recreation area. This finding suggests that there may be limited use of the facilities in the peripheral parts of the Delta regardless of facility need. These findings could also be due, in part, to other constraints such as shallower waters and less suitable areas for boating in these outlying areas. “*Outside Delta*” responses refer to facilities located beyond the Delta study area.

Figure 4-9 narrows the field to only those responses that deal with perceived facility needs – RURA responses. (The “*fine as is*” responses are not included.) As in the case of **Figure 4-8**, there was a

high variability of response to each specific question for both the small- and large-boat owners. While the proportion of respondents specifying needed improvements are smaller than the overall response rate as illustrated in **Figure 4-8**, for each zone, the basic pattern of responses is relatively similar. First, the geographic distribution of facility needs is concentrated in the in the West, Central and East Zones. Secondly, complementing the findings regarding overall need preferences, members of the large-boat category are somewhat more satisfied with existing facilities than small-boat owners, who seem to demonstrate the greater need for improvements.

Among large-boat owners, the greatest concentrations of RURA responses are for the West Zone (15%), followed very closely by East Zone (12%) and the Central Zone (9%). Note that the difference between the three zones is relatively close for this boater category. Very small portions of large-boat owner responses refer to facilities needing RURA in outlying zones. Small-boat owner RURA responses are firmly centered in the West Delta (25%), with the remaining zones RURA response rate generally mirroring the large-boat owner’s response rate throughout the zones but at a higher percentage of need by zone. Note that among all Delta zones, the North and Northwest Zones appear to have the least identified RURA needs for both boat owner groups.

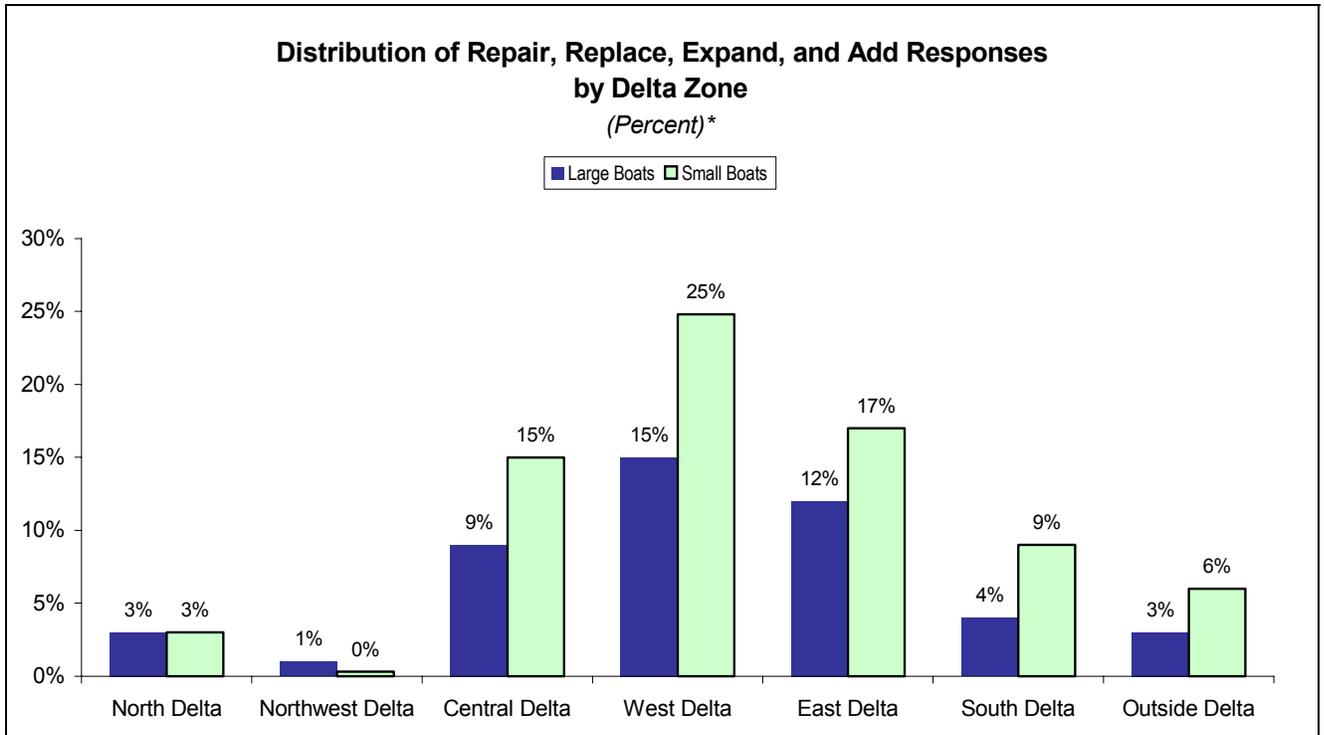
The breakdown of facility needs by type for each of the Delta Zones is expressed in **Table 4-5**. While this table mirrors **Figure 4-7** in general in regard to the distribution of responses across the Delta Zones, it is different in that **Table 4-5** is a tabulation of the actual responses to each of the facility need questions. It does not compare the number of responses to the number of boat owners responding and calculate a percentage of responses for each question. Therefore this table is useful in comparison with **Figures 4-7, 4-8, and 4-9**, however, while it shows the same trends, it does not correlate with them.



*Survey respondents were given the option of indicating more than one response, so results may exceed 100%.

** Responses shown in this figure include the response "Fine as is".

Figure 4-8



*Survey respondents were given the option of indicating more than one response, so results may exceed 100%.

** Responses shown in this figure do not include the response "Fine as is".

Figure 4-9

Table 4-5
Distribution of Repair, Upgrade, Replace, and Addition (RURA)¹ by Delta Zone
(Number of responses)

Facility Type	North Delta	NW Delta	Central Delta	West Delta	East Delta	South Delta	Other²
Restrooms/showers							
Small Boats	4	2	30	53	46	21	16
Large Boats	2	1	28	33	18	7	8
Campgrounds							
Small Boats	6	0	35	50	40	8	14
Large Boats	1	1	12	16	11	2	2
Day-use/picnic areas							
Small Boats	5	0	33	44	40	19	12
Large Boats	0	2	8	18	15	4	3
Parking							
Small Boats	8	0	30	50	29	15	18
Large Boats	0	0	0	0	0	0	0
Carry-down walkway							
Small Boats	6	0	33	42	22	13	14
Large Boats	0	0	0	0	0	0	0
Launch ramps							
Small Boats	9	1	38	65	40	23	23
Large Boats	2	0	13	19	21	2	1
Short-term slips/tie-ups							
Small Boats	6	0	37	57	33	24	13
Large Boats	4	2	27	44	26	10	13
Utilities							
Small Boats	2	0	13	22	17	9	9
Large Boats	1	1	16	25	16	5	5
Boarding floats							
Small Boats	4	0	20	26	16	13	10
Large Boats	0	0	0	0	0	0	0
Gasoline facilities							
Small Boats	5	1	22	35	23	16	12
Large Boats	4	0	14	21	13	8	9
Sewage pump-outs							
Small Boats	1	0	7	17	16	13	10
Large Boats	7	0	18	28	26	8	11
Long-term slips/tie-ups							
Small Boats	2	1	12	27	13	6	9
Large Boats	3	1	25	30	29	6	6

Note 1: Includes Repair, Replace, Expand, and Add responses but does not include "Fine as is" responses

Note 2: Category includes facilities or sites outside the Delta and/or facilities in the Delta that could not be tied to a specific geographic area

Table 4-5 (continued)
Distribution of Repair, Upgrade, Replace, and Addition (RURA)¹ by Delta Zone
(Number of responses)

Facility Type	North Delta	NW Delta	Central Delta	West Delta	East Delta	South Delta	Other ²
Oil disposal							
Small Boats	1	0	6	22	11	12	7
Large Boats	2	1	12	19	18	5	7
Bilge water pump-outs							
Small Boats	1	0	8	22	13	9	9
Large Boats	4	1	16	25	13	7	10
Diesel fuel facilities							
Small Boats	2	0	8	11	5	1	7
Large Boats	3	0	8	11	12	4	5
Other facilities							
Small Boats	1	0	1	8	8	2	4
Large Boats	0	0	4	2	4	0	1

Note 1: Includes Repair, Replace, Expand, and Add responses but does not include "Fine as is" responses

Note 2: Category includes facilities or sites outside the Delta and/or facilities in the Delta that could not be tied to a specific geographic area

DELTA BOATING SITE PREFERENCES

With hundreds of boating sites available in the Delta, some with unmapped colloquial names, the preferred boating sites spanned the entire Delta region. Moreover, respondents listed both specific facilities, such as marinas, as well as general locations, such as a town site or section of a river. Note that respondents were able to mention up to three favorite sites, with many respondents making multiple mentions. A brief list is provided here of the most-mentioned sites for each boater group, thus providing a comparison between each group’s most popular boating facilities and areas. See **Appendix 4-2** for a complete listing of identified sites and facilities by Delta zone area.

Net responses by zone for the Documented Vessel portion of the large-boat category were distributed as follows. The North Zone contained six percent of the cited locations or facilities, with Sacramento (4%) and Old Sacramento (2%) the principal referenced areas or facilities. The Northwest Zone included three percent of cited locations or facilities, with Prospect Slough (1%) and Five Points (1%) the principal referenced facilities or areas. The Central Zone included 34 percent of

cited locations or facilities and the Delta Meadows (6%), Georgiana Slough (5%), and Steamboat Slough were the principal referenced areas. The majority of geographic references fell in the West Zone with 66 percent of cited locations or facilities contained in that area. Principal referenced facilities or areas in the West Zone include Rio Vista (15%), Mandeville Island (12%), Sacramento River (8%), and Franks Tract (7%). The East Zone included 35 percent of all cited locations or facilities, with the principal referenced facilities or areas being Stockton (18%), Potato Slough (9%), and Mildred Island (8%). The South Zone included 18 percent of all cited locations or facilities. The principal referenced facilities or areas in the South Delta were the San Joaquin (8%) and Sacramento Rivers (2%).

4.6 OWNER PERCEPTIONS

This section describes boat owner perceptions of the Delta in terms of items or features that are considered important to the recreation boat owner and how well those features meet their expectations. Assuming that perceptions have a strong relationship with boating use and preferences, the following data offer insight for

decision makers interested in understanding the mind-set of the boat owner that recreates in the Delta. Boat owner perceptions discussed below include the factors that may impact the decision whether to boat in the Delta, an importance ranking of Delta boating attributes, and a comparison between the importance of these attributes and the Delta experience itself.

ATTRIBUTES IMPACTING THE DECISION NOT TO BOAT

Table 4-6 shows a ranking of factors that impact large-boat owners’ decision **not** to boat in the Delta. As previously indicated, the factors with the greatest negative impact are water depth (62%) and water quality for swimming (53%), followed by notable minority responses for congested waterways (45%), and water quality for fishing (37%). By contrast, factors with the least negative

impact are the adequacy of parking and insufficient information about facilities, features, and attractions. Given the propensity for boat owners to rely on personal experience as an information source about the Delta and the tendency for large-boat owners to arrive in the region by water or access via private marinas, these findings make a great deal of sense.

Note that the highest response rate among medium-impact factors is *inadequate facilities*. Curiously, there is an even split between those who mentioned *inadequate facilities* as either low impact or high impact. These data may indicate the relatively lesser weight given to facilities compared to other more intrinsic characteristics of the Delta such as water quality or congestion when a Delta boating trip is being considered.

Table 4-6
Factors Impacting Decisions Not to Boat in the Delta by Owners of Large Boats
(Percent)

Factors	Low Impact	Medium Impact	High Impact
Insufficient information*	62	25	15
Not enough transient slips, tie-ups	30	33	31
Inaccessible due to depths	15	19	62
Inadequate facilities	28	39	28
Congested waterways	18	34	45
Inadequate parking	44	23	18
Poor water quality for fishing	30	27	37
Poor water quality for swimming	15	31	53

* Regarding tie-up facilities, features, attractions, and fishing opportunities

Similar findings for the small-boat group are revealed in **Table 4-7**. As shown, the congested waterway category is the principal factor of concern (49%) followed by poor water quality for swimming (39%) for the small-boat group. The least negative impact is *information availability*, with 47% of the small-boat owners considering *information availability* as a low impact. Note

that while these findings may indicate a limited need for information, these responses are primarily derived from individuals with Delta boating experience, reiterating the role of personal knowledge as a primary information source. While these may be factors impacting the decision **not** to boat in the Delta, they clearly rank below the factors related to the Delta’s intrinsic qualities.

Table 4-7
Factors Impacting Decisions Not to Boat in the Delta by Owners of Small Boats
(Percent)

Factors	Low Impact	Medium Impact	High Impact
Insufficient information*	47	32	20
Not enough boat access sites	39	26	35
Not enough launch ramps	56	13	13
Inadequate facilities	37	37	26
Congested waterways	21	30	49
Poor water quality for fishing	43	21	36
Poor water quality for swimming	33	28	39

*Regarding site location, features, attractions, and fishing opportunities

A comparison between each group’s view of decision-making factors is illustrated in **Figure 4-10**. As indicated, both owner groups are in agreement about the relative impact of water quality and congestion on a decision **not** to boat in Delta waters. With the exception of factors not

listed for the small-boat group (water depth and transient moorings), the only factor to show a disagreement is launch ramps, which are typically more important as an access facility for small-boat owners.

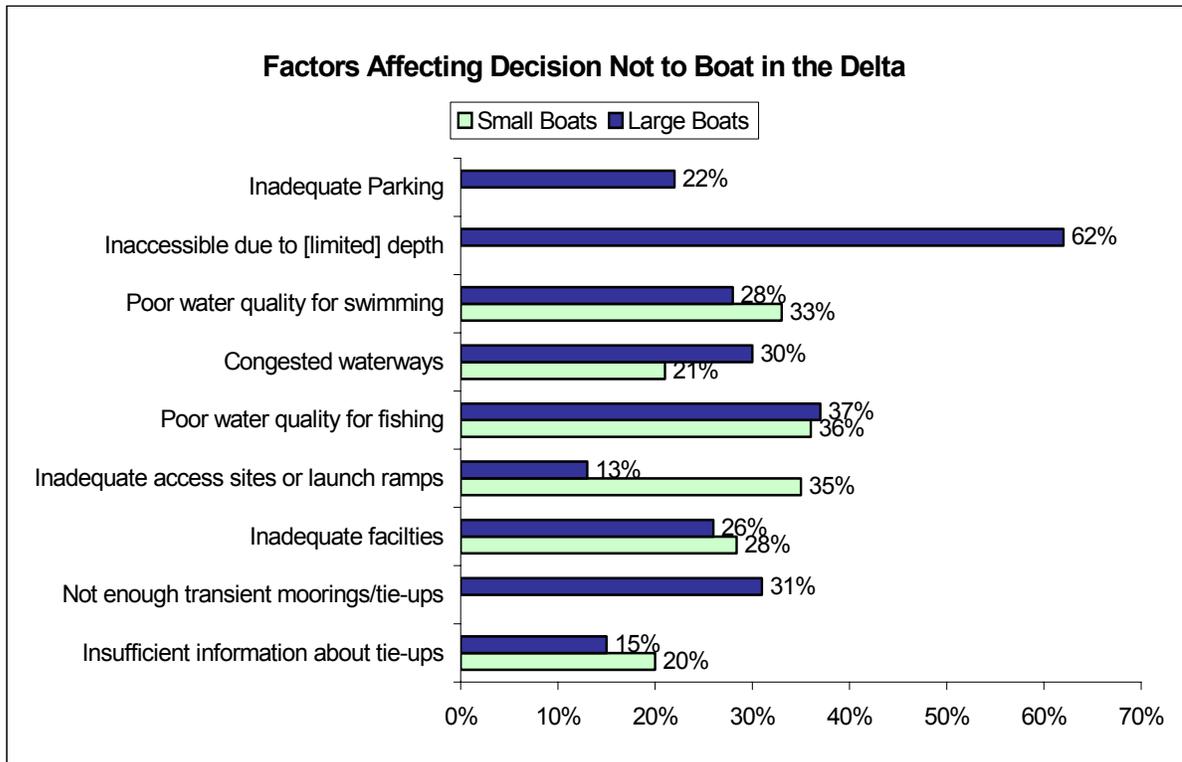


Figure 4-10

BOATING ATTRIBUTES CONSIDERED IMPORTANT BY BOAT SIZE CATEGORIES

One aspect of recreation policy analysis for the Delta boating study is the perceived quality of the recreation experience, and most importantly, those attributes deemed critical to boat owners and in which the Delta needs improvement. Complementing the previous decision-making discussion, the following section shows a comparative importance/performance analysis for a range of boating attributes.

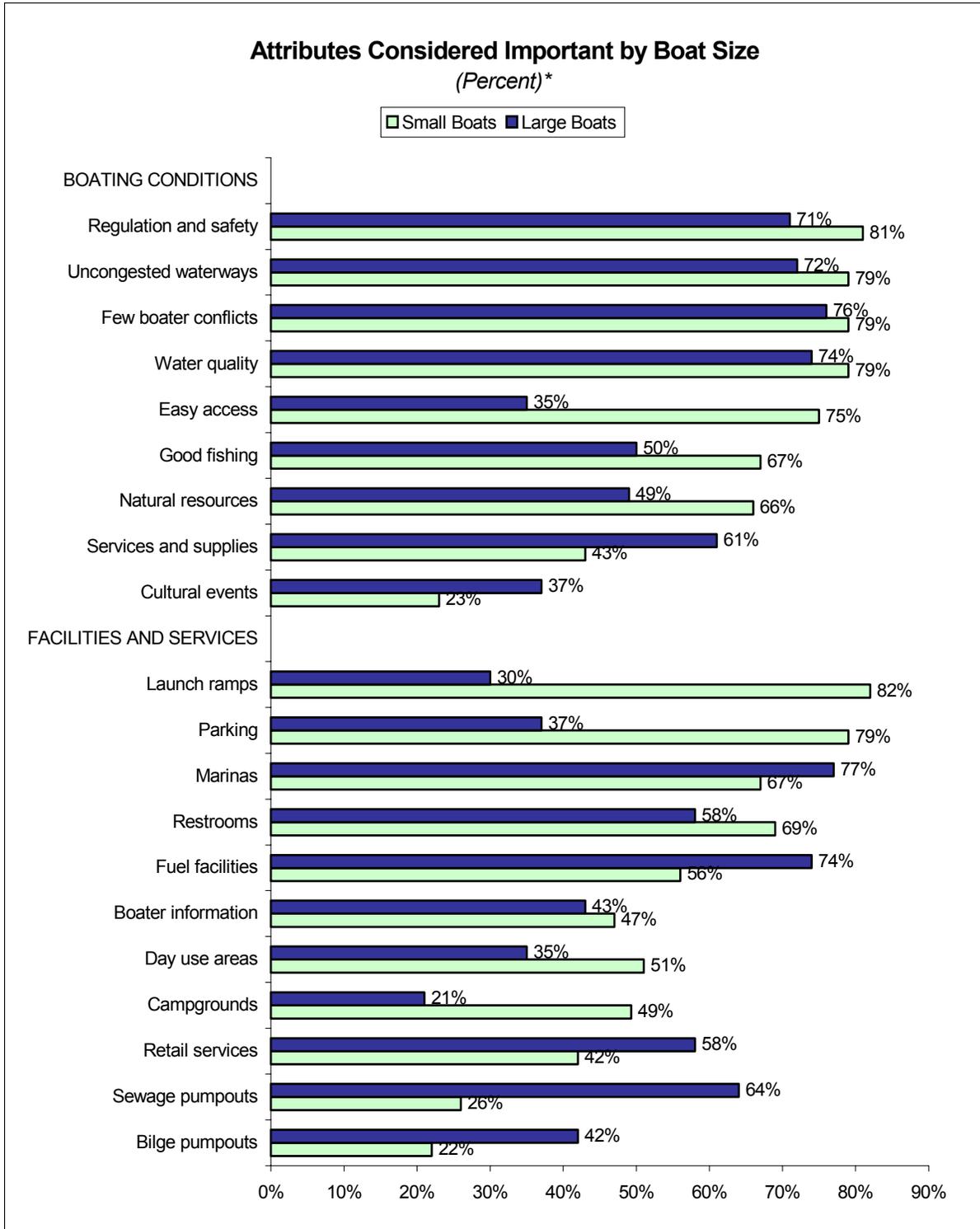
Boating attributes were rated on a five-point scale, with the range going from “1,” meaning *not at all important*, up to “5,” meaning *extremely important*. Similarly, the Delta’s performance ratings for the same range of attributes used a similar scale, with “1” meaning *very poor experience* and “5” meaning an *excellent experience*. **Figure 4-11** shows attributes rated important for recreational boating (rankings of “4” or “5”).

Boating Conditions

As shown in the **Figure 4-11**, there is little difference between large-, and small-boat owners when rating the most important boating condition attributes. For both large- and small-boat owners the relative importance of regulation and safety is

evident (71% for small boats and 81% for large boats). Congested waterways (72% and 79%), boater conflicts (76% and 79%), and water quality (74% and 79%) rated extremely or somewhat important. Notice that both groups have similar attitudes toward water quality, with this attribute receiving or equaling the highest aggregate of importance. (This water quality attribute is a revealing finding, as shown in the subsequent analysis of compared mean importance/performance scores.)

In contrast, the remaining boating-related attributes generally show little agreement. Large-boat owners are more concerned with the natural resources of the region (49%) as well as access to services and supplies (61%), and to a lesser extent, cultural events (37%). As might be expected, a significant portion of small-boat owners (i.e., owners of craft that can be carried or towed by trailer) consider easy access to boating sites as important compared to large-boat owners, who may either arrive in the region already on the water or gain access via a private marina berth. Accordingly, a solid majority of small-boat owners rated easy access (75%) as important, followed by the response for good fishing (67%), natural resources (66%), services and supplies (43%), and cultural events (23%).



*Survey respondents were given the option of indicating more than one response, so results may exceed 100%.

Figure 4-11

Boating Facilities and Services

The greatest disparity between the two categories of boat owners occurs with respect to preferences for facilities and services. The majority of large-boat owners are comparatively more concerned with the quality of marinas (77%), fuel facilities (74%), retail services (58%), and sewage pump-out facilities (64%). Note also that though bilge pump-outs received a minority of large-boat owner responses, this attribute is nonetheless far more important to large-boat owners. Large-boat owners are least concerned with launch ramps, parking, campgrounds, and day-use areas.

In comparison, small-boat owners rate parking (79%) and launch ramps (82%) as the most important facilities, followed by a majority response for fuel facilities (56%) and day-use areas (51%). Nearly half (49%) also rated campgrounds as important. Given the type of vessels used, the greater activity rates, and shorter lengths of stay, these predominantly day-use serving facilities are, not surprisingly, more important to those in the small-boat category. Note also that the small-boat owner is very concerned with attributes such as boater information (47%), and retail services (42%). Understandingly, the small-boat owners did not rate the bilge and sewage pump-outs categories as very important.

Finally, in the assessment of boating facilities, both large-boat owners and small-boat owners regard the availability and quality of restroom facilities as important. A majority of large-boat owners (58%) gave restrooms high importance ratings matched by a greater percentage of the small-boat respondents (69%).

DELTA BOATING CONDITION VERSUS PERFORMANCE RATING BY BOAT SIZE

Figure 4-12 and **Figure 4-13** show the ascending mean scores for the importance of boating destination attributes compared to the Delta's mean score performance as a boating destination for the same attributes. This method of comparing the perceived importance of attributes for boating destinations in general with respondents' perceptions of the Delta's performance as a specific destination illustrates the pertinent policy issues facing those planning for future recreational boating needs. In particular, the gaps between those attributes rated as important and those rated relatively unimportant can identify specific funding and other policy priorities. For example, a low performance score on a highly rated importance attribute can imply an immediate need to allocate resources to a particular problem. Conversely, a low performance score on an unimportant issue may not require the same magnitude of response, although it may suggest that there is an issue in need of monitoring.

A potential quandary is revealed in these figures for Delta policy makers since they suggest that the region fairs most poorly on issues considered more important while typically exceeding expectations for those issues regarded as least important.

The most evident disparity between the ratings of importance of an attribute vis-à-vis the actual performance rating is with the attribute of water quality. While it is one of the most highly rated attributes on the importance scale, the perceived quality of water in the Delta was one of the most poorly rated on the Delta's performance scale regardless of boating group. Though perceptions about Delta water were rated somewhat higher by large-boat owners overall, the negative impression of water quality is nevertheless significant. Thus, it can be inferred that the disparity between water quality importance and Delta performance represents one of the most critical issues facing recreation planning in the Delta.

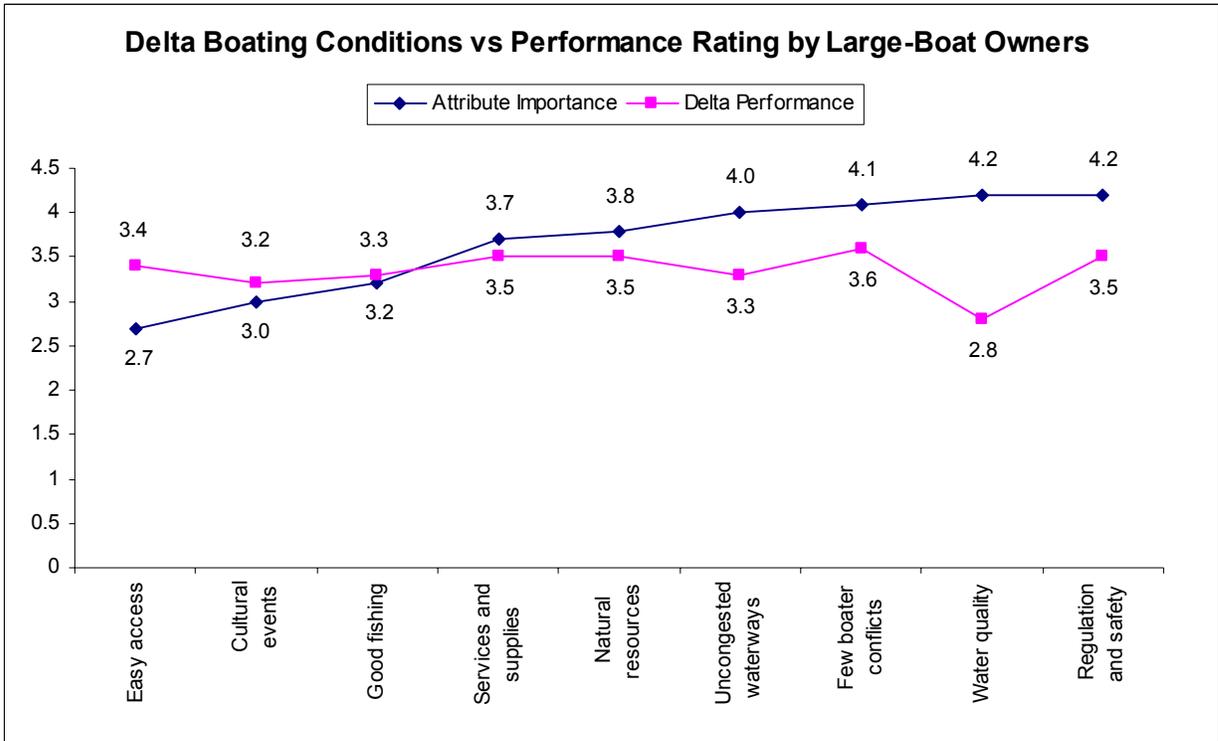


Figure 4-12

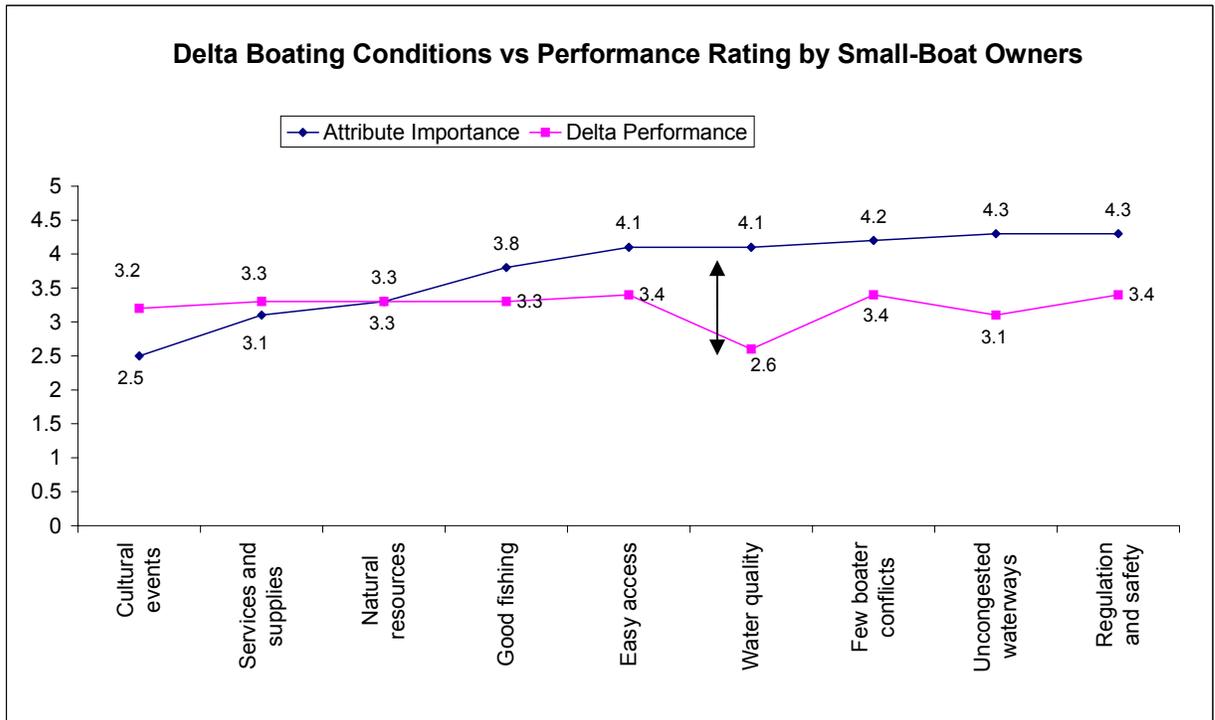


Figure 4-13

The relationship between negative perceptions about water quality and the potential decline of use of the Delta as a recreational resource is perhaps the key issue pertaining to the Delta's future. The nature of these perceptions and their implications for water-based recreation will need to be addressed either directly, as an existing resource management issue, or indirectly, through a public information strategy that can adequately explain the reason for misperceptions about the water if such is the case. However, modifying strongly held negative perceptions is typically a daunting public relations challenge.

Following the issues of water quality are gaps in perceptions of boating regulations and safety. These gaps are particularly notable concerning the adequacy of boating regulations and enforcement. Among large-boat owners, the gap is slightly less than for small-boat owners. However, given the relative importance of this issue, some level of action with either increased law enforcement presence or speed control, or additional education information may be necessary in the short term. As with water quality, these are perceptions that can dramatically affect boating activity and certainly reflect boaters' perceptions of the Delta's intrinsic value as a destination. Closely related are safety concerns regarding problems with waterway congestion and boater conflicts, with congestion showing a greater gap between importance and boaters' reported experience in the Delta region. Congestion is an expressed concern and especially problematic for small-boat owners who may be more likely to use narrower channels.

With the remaining rated attributes, there exists a perceived performance gap for the large-boat owners regarding natural resources and, to a lesser extent, services and supplies. The Delta exceeds the large-boat group's expectations for *fishing*, *cultural events*, and *ease of access*. In contrast, the small-boat group shows a gap between Delta performance rating and issue importance for the categories of *easy access*, *good fishing*, and to a lesser extent, *natural resources*. Only with *services and supplies* and *cultural events* does the

Delta exceed performance expectations from the small-boat group's perspective. While possibly not as critical as the issues of water quality and safety, these second tier issues may be important in the long term for continued use of the Delta by these boat owners.

FACILITY SERVICES VERSUS PERFORMANCE RATING BY BOAT SIZE

Figure 4-14 and **Figure 4-15** show the mean importance scores compared with Delta performance scores for boating-related facilities and services. As indicated, when graphs are compared, large-boat owners appear somewhat more satisfied with service and facilities, reflecting a pattern shown throughout this analysis. There are some notable exceptions between large- and small-boat owners' points of concern and issues considered important.

For the large-boat owners, the most significant disparities between facility importance and perceived performance include marinas, fuel facilities, and sewage pump-outs. Interestingly, marina ratings were not as disparate as for some of the service facilities typically provided by the marinas. Closely followed by and associated with fuel facilities, is a perceived gap between the importance of sewage pump-outs and the availability of this amenity. Marinas also demonstrate a performance gap, though to a lesser extent than either of these specific amenities as related to fuel facilities and pump-outs. This point is interesting since marinas are usually where these amenities are located.

Identified through these findings is the need for boating service-type facilities including fuel stations and sewage pump-outs. Provisions for these specific service-related facilities could be linked with future plan application proposals as a part of the review criteria considered for DBW loans and other programs for private sector marinas as well as planned investments by the public sector.

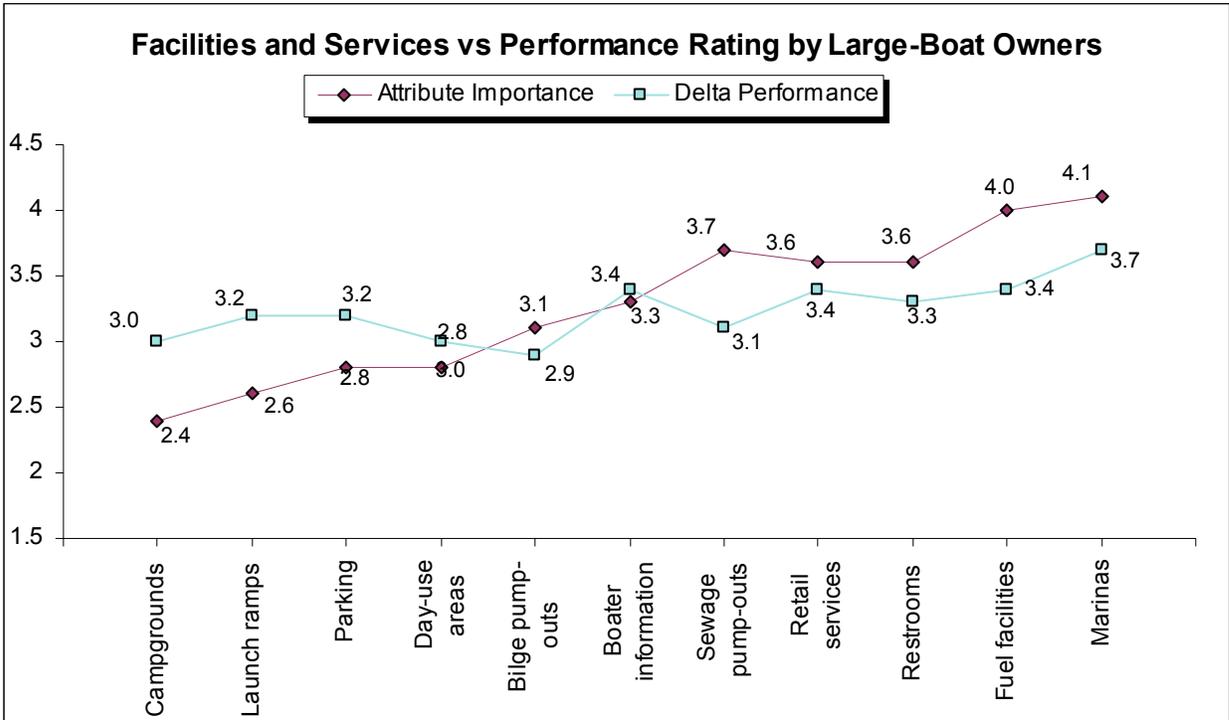


Figure 4-14

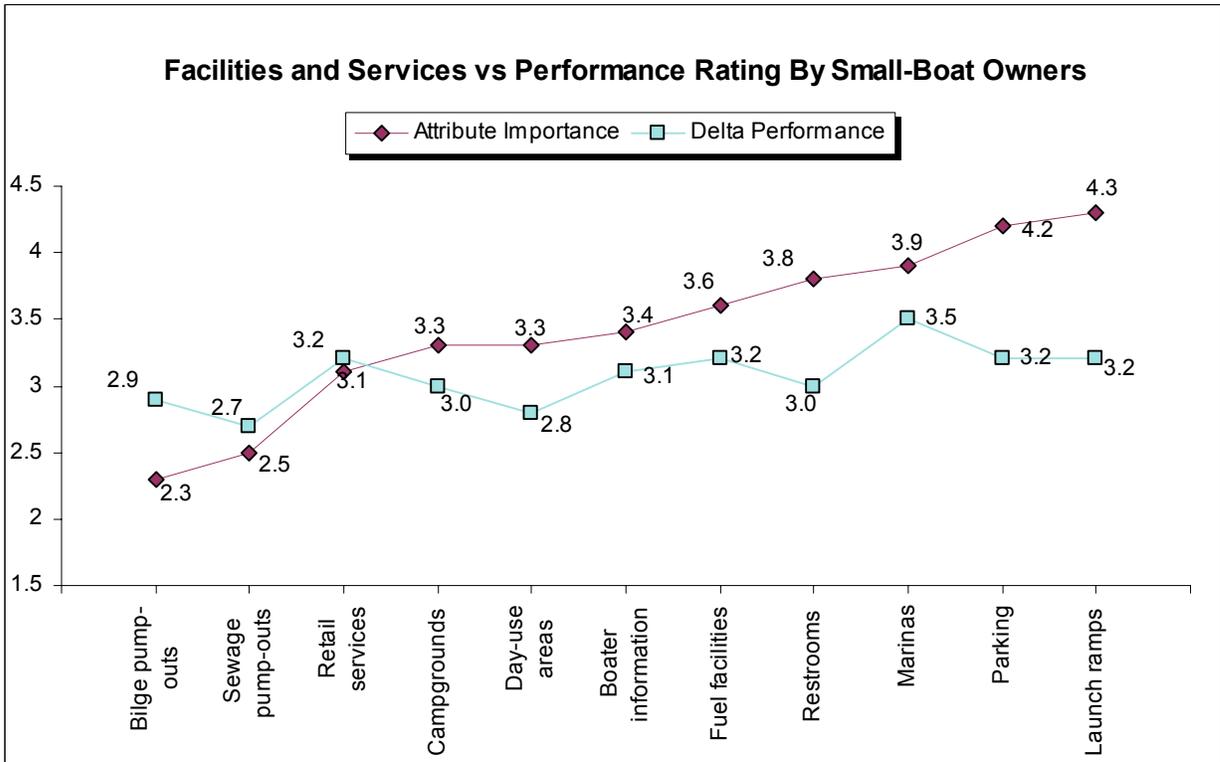


Figure 4-15

Note that the data suggest that the large-boat group would like improved availability of sewage pump-outs but appear comparatively satisfied with the existing bilge water pump-out facilities. This is an interesting and somewhat contradictory finding since pump-outs of both types were often mentioned when respondents listed improvements for specific facilities. Though this finding does not mean that this group would not like additional bilge pump-out locations, it may simply indicate that among all boating facility types, large-boat owners perceive the Delta's performance as very close to meeting expectations. The subsequent study of statewide boating needs should shed additional light on this specific issue and may indicate that while large-boat owners want additional bilge pump-outs, the Delta compares favorably with other boating destinations. Finally, in contrast to small-boat owners, those owning large craft view the Delta as more than adequate in the areas of access, vehicle parking, and certain land-side amenities, including camping and day-use areas.

Among small-boat owners, the most problematic facilities are the existing restrooms. Expectations regarding the quality and availability of existing restrooms show the greatest gap between attribute importance and the rating of performance by the small-boat owners. Given the previously identified water quality issues, additional and improved restroom facilities throughout the Delta could not only begin to address real but also perceived water quality concerns. Because of the potential "double value" of improvements of these facilities, an implication of this study would be to include restroom improvements as a component to other capital improvement and/or environmental enhancement programs where possible and practical.

The small-boat group also raised access issues in the Delta, with launch ramps and parking listed as the key attributes that fall far short of expectations. A second tier of boating-specific services and facilities needing some improvement include marinas, fuel facilities, and boater information. Finally, note that given the higher propensity for camping and picnicking among small-boat owners,

more and better land-side amenities could improve the recreational experience for the Delta's smaller vessel recreationists. As might be expected, small-boat owners are less concerned with vessel pump-out stations since small boats rarely require these services and as a result, small-boat owners perceive the Delta as more than adequate in this regard.

WATER QUALITY PERCEPTIONS

Figure 4-16 illustrates the range of responses regarding the question of Delta water quality. In the 2000 survey, water quality was singled out as a significant factor influencing boat owners' perceptions of the Delta as well as their preferential decisions as to whether and when they use the Delta and the Delta's facilities. Consequently, a question was added to the 2001 survey that was administered to the Documented Vessel category of Delta recreational boats that attempted to provide more detail about concerns regarding water quality.

This added information provides an opportunity for inferential observations about water quality issues. The primary concern appears to be the physical attributes of the water in terms of risks or perceived risks related to body contact, with a rating of (56%). That finding is mirrored by the concern of possible sewage contamination in the water (51%), which perhaps is more of an assumed risk than one based on actual experience or observation. Also rated high are the concerns about aquatic weeds (52%) – a repeated concern expressed by the large-boat owners – and water clarity (51%).

The next tier of important factors about water quality included an array of factors such as debris in water (43%), excessive water siphoning (41%), and water color (41%). The remaining factors are generally more tangential and are rated from 34 to 26 percent in terms of identified concerns. Conclusions drawn from these responses suggest that the boat owners are specific about what concerns them and they are primarily worried about the health risks, boating impediments, and the aesthetic characteristics of the Delta water.

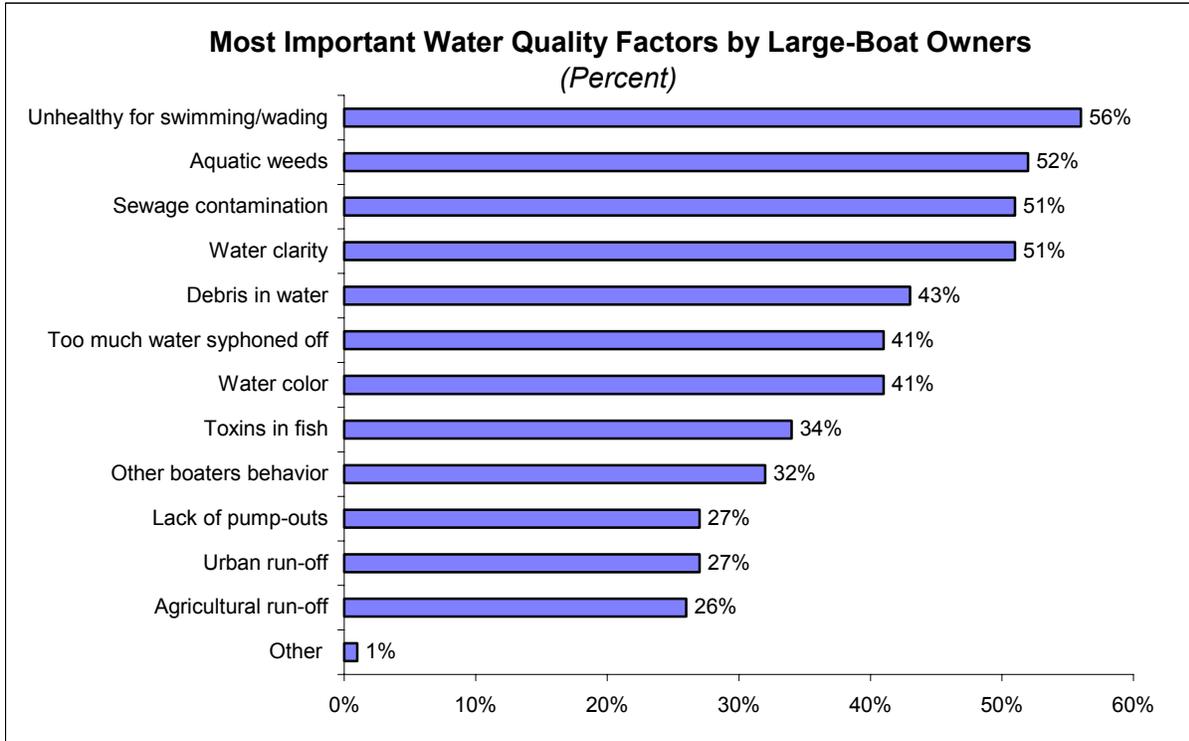


Figure 4-16

SUGGESTED IMPROVEMENTS AND COMMENTS

Figure 4-17 and Figure 4-18 show survey respondent comments provided as part of a series of open-ended questions. This comment section can be useful since respondents who took the time to write their comments were able to provide clarity regarding their overall opinions about the Delta. In order to develop the referenced figures for this section, some categorical interpretation of the array of responses was necessary.

Not surprisingly, suggestions for improving water quality are listed as the single most important improvement by both large- and small-boat categories (17% and 21% respectively). These mirror findings found in the data and serve to emphasize the importance of this issue for recreation policy makers and planners. Among the large-boat group, the second tier of suggested improvements included *maintain existing* (7%), which is not surprising considering the higher levels of satisfaction displayed by large-boat respondents. In addition, this tier included water safety concerns, such as more law enforcement (6%) and boat speed controls (4%).

Other suggestions focused on issues particular to the large-boat owner, especially control of water plants (7%), dredging (6%), and better water flows (4%). The lowest tier included a range of suggested improvements but each garnered three percent or less of the responses.

By contrast, a second tier of improvement suggestions by small-boat owners includes more and better launch ramps (15%) and restrooms (10%) – a very evident issue of concern for these boat owners. In addition, the small-boat group also suggested better boater education (6%), maintaining existing facilities (4%), and clean up (4%), as higher priority items.

Sites like Westgate (7%) responses refer to the developed launch site, camping, and day-use area operated by San Joaquin County. *Sites like Westgate* was used as an improvement option since it was identified as a model for low-intensity access development (particularly by the small-boat category) during several of the public workshop sessions and thus illustrates an important type of access improvement. Among those in the windsurfer segment, preference for *sites like Windy Cove* refers to the state park facility across from Brannan Island State Park that features

grassy rigging areas, permanent flush toilets, potable water, and parking. Those attending the windsurfer public workshop frequently mentioned Windy Cove as a model facility. Finally, note that several of the written improvement comments for both groups refer to clean up and/or maintenance – attributes not specifically covered in the survey’s

ratings questions. Other small-boat group suggestions included boat speed control (3%); with the remaining range of suggested improvements each garnering less than a three percent response rate.

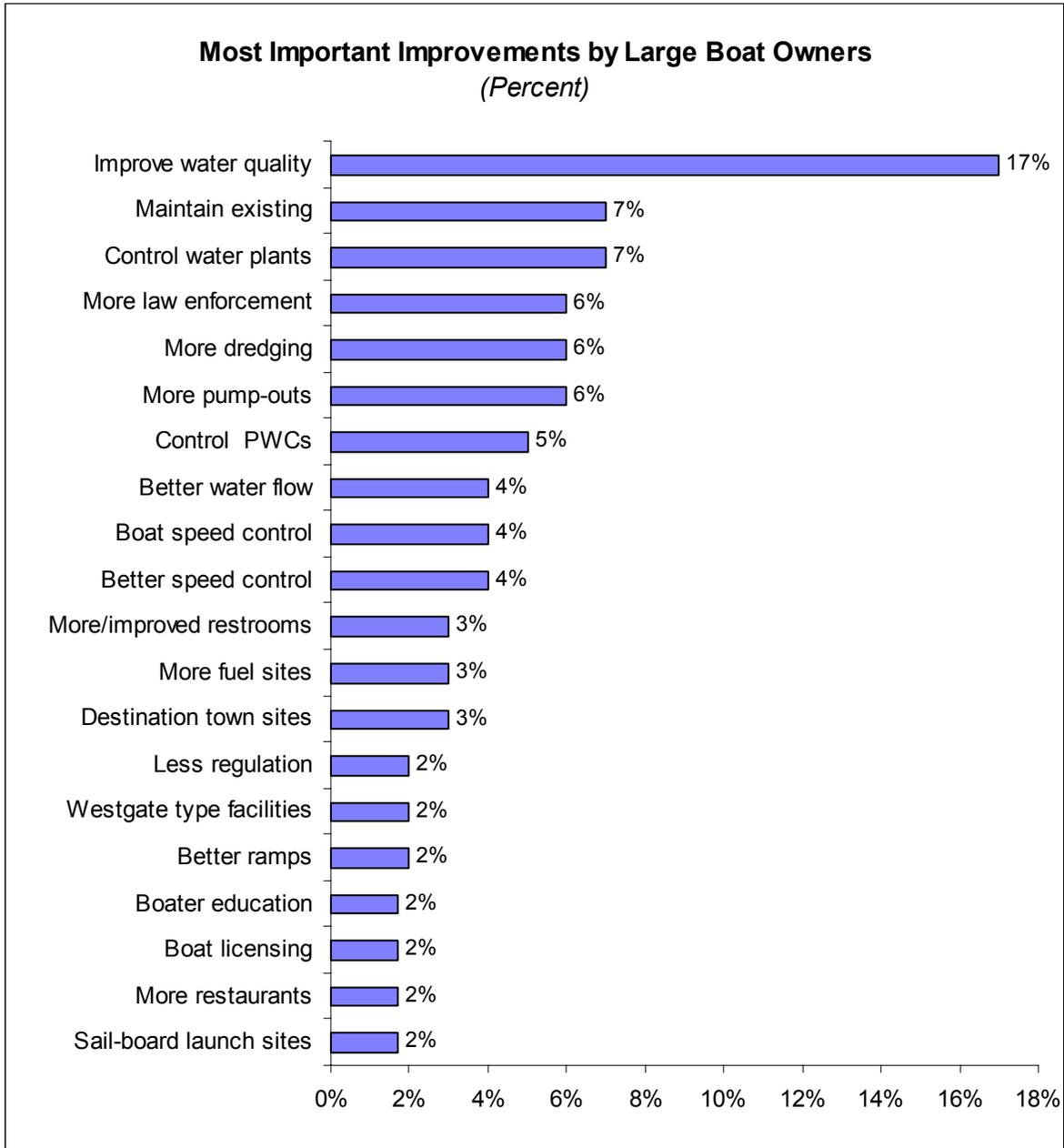


Figure 4-17

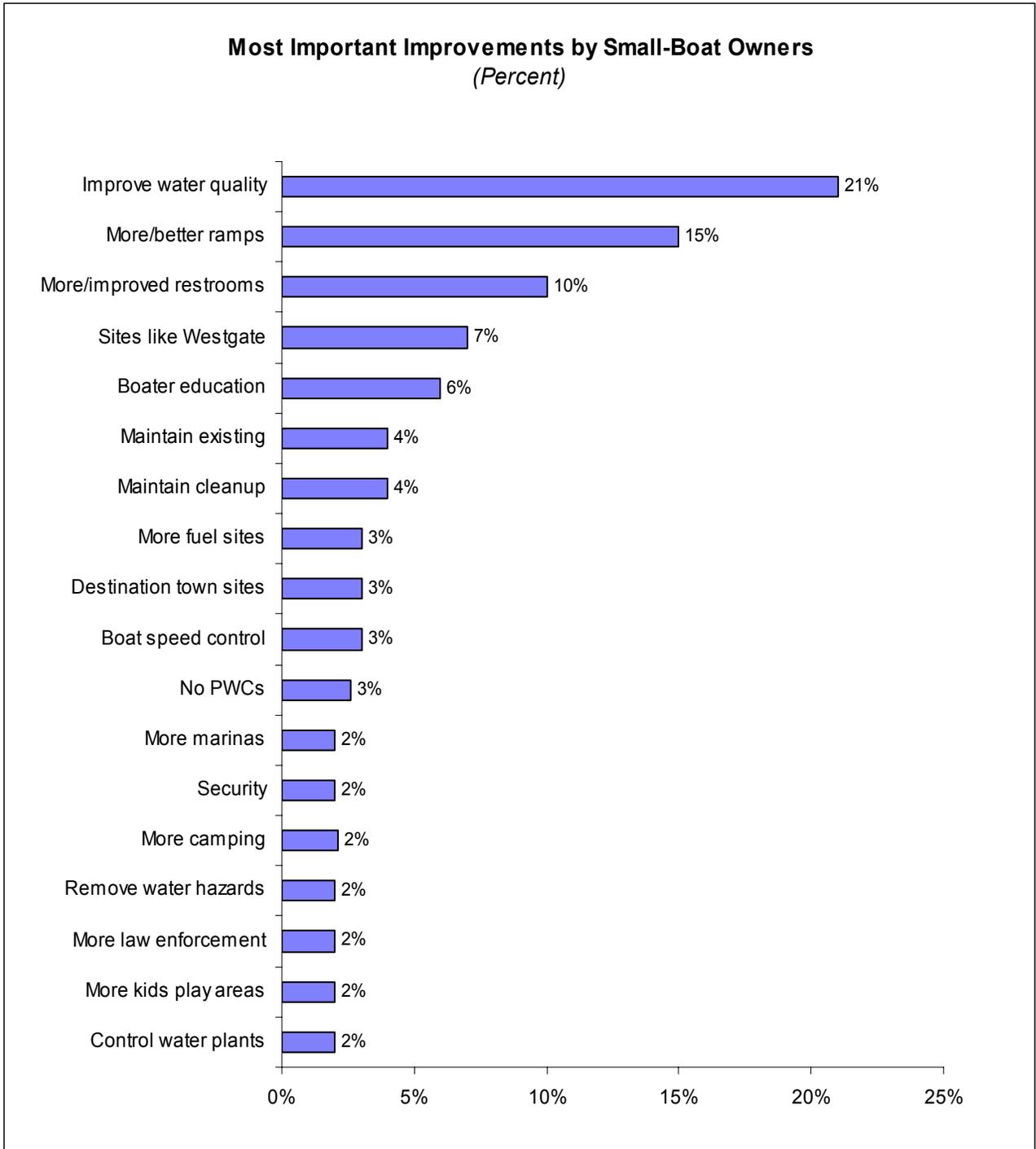


Figure 4-18

4.7 OBSERVATIONS AND CONCLUSIONS

While some of the information gathered in these surveys is a gauge of boater perceptions, these perceptions nevertheless suggest the extent to which boat owners will use Delta waters and/or

support Delta-related policies in the future. More importantly, these perceptions can influence the degree to which boat owners support public investments (or lack of investment) in recreation facilities in the Delta. The responses also provide insight regarding the public participation in the overall Bay-Delta CALFED process and perhaps

some of the important issues with regard to recreational boating. One significant finding is that there is a relatively loyal and regionally based recreational constituency for the Delta that is likely to stay informed about recreation and planning issues affecting the area. Similarly, this group is more likely to respond to critical decisions affecting the Delta than the recreation boat owners who travel from distant regions of California.

WATER QUALITY

Water quality and boating regulation and safety issues may have far-reaching impacts since these could be considered public health issues. Clearly, issues that may relate to overall regional planning can also influence the recreational user. Because this chapter presents a quantitative study, the reasoning behind these perceptions may require further investigations. For example, water quality issues may have as much to do with the visual appeal of the peat-laden Delta waters as with actual or perceived water-borne health risks.

CONFLICTING PERSPECTIVES

Regarding specific investments for boating, there is an apparent conflict in boater opinions. While most surveyed boat owners view the Delta's boating facilities as *fine as is*, a minority sees the region as needing more and improved facilities. Interestingly, more facility-need responses concern additions or expansions than repairs or replacements – this result despite some of the open-ended comments regarding the simple need to *clean up the Delta*. Similar responses from the provider sample further support this need for improvement. Interestingly, many facility issues that garnered comments could also be related to water quality perceptions, such as the need for more restrooms (small boats) and pump-out services (large boats).

Though the Delta comprises a vast network of waterways, comments regarding facility investment focus on the central Delta area – West Zone, Central Zone and East Zone. This is particularly true for small-boat owners, who confine most of their facility responses to the West Delta and who, in fact, are also the least satisfied with the state of current boating facilities. Accordingly, boat owners are also more likely to concentrate their boating activities in the central

part of the region – a finding similar to the DPR study. (This is in contrast to the more dispersed travel pattern of those who participate in the Delta's land-side recreation offerings.)

CONFLUENCE OF BOATING NEEDS

For recreational boating needs, the confluence of land-side recreation and water recreation meets at the center of the Delta (West Zone) – whether it is for additional parking, campgrounds, picnic and day-use areas, or associated restroom and shower facilities. Although inferential, information gathered through this broad-based survey process helps to construct a picture of how the Delta region functions as a recreation area from the perspective of the targeted user groups. We can surmise a basic level of satisfaction and/or need as expressed by the respondents. For DBW's interest in boat-specific facilities, the findings provide direction for policy and project development, and can be summarized in several general project-related areas:

Water Quality

Clearly, this is the primary Delta attribute that most concerns the boating public. As revealed in the survey responses, there is a broad range of water-related issues that the boating public is concerned about. With the array of concerns identified as associated with water quality, a more detailed examination of a range of strategies among the various federal, state, and local management agencies and entities is suggested. Issues related to run-off and water flow volumes are broader than the scope of this study and beyond the authority of DBW. However, the research findings here do establish a relationship between water recreation and these other larger water policy issues. An example of water quality-related action that may be within DBW's authority would be through the investment in restroom and disposal facilities as a means of mitigation for local water contamination.

Education and Safety

Primary policy areas include congested waterways, plants and debris, boater conflicts, and other regulation and safety issues that are problematic for the Delta, with its dispersed and complex system of waterways and recreation areas. Continued education programs are certainly within DBW's mandate. Law enforcement, on the

other hand, is largely a local government-funded responsibility, though DBW may examine funding assistance opportunities for local government after reviewing the supporting data outlined in this report. To the extent feasible, DBW should encourage and support collaborative approaches that will engage other entities, including local, state, federal, and private interests for enhancing safety in the Delta's waterways. This engagement can be implemented through policy, regulations and information or through investment such operations as dredging and debris or plant removal.

Survey respondents were asked to give comment about recreation boating in the Delta. An extensive volume of information was gathered from this anecdotal material and has been gleaned for various specific topic areas covered in this study. A complete compilation of these comments is included in **Appendix 4-3**.